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ABSTRACT

The federally funded Special Services for Disadvantaged Students (SSDS) program is examined for the 1979-80 academic year in 58 institutions; the program's short-term impact on participating freshmen is summarized. Up to 200 students at each site were studied to determine whether program participation levels correlated with outcomes and whether student background was related to the levels of services received. After an overview and a review of the study methodology, Chapter 3 discusses the SSDS program in terms of federal regulations, reauthorization, budgeting, funding, and monitoring. In Chapter 4 the program's context, history, resources, and administrative procedures are examined. Chapter 5 covers the interactions between programs and institutions, followed in Chapter 6 by an overview of services. The characteristics of eligible students and their relationships to services rendered are addressed in Chapter 7. Among the conclusions are: (1) SSDS services are focused, as intended, on economically and educationally deprived students; (2) SSDS students are more likely to last through freshman year than students not receiving SSDS services; (3) most project directors are experienced and usually members of a minority group; (4) the average project has 414 participating students; (5) students having larger amounts of monetary aid tend to have higher levels of persistence; (6) students whose parents had higher incomes tend to take and complete more courses and to receive higher grades; and (7) students receiving more services are likely to complete more courses. Extensive tables, figures, and appendices are provided, giving data on percentages of students and faculty by race, staff turnover rate, administrators' perception of SSDS academic credibility, etc. (LC)

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Evaluation of the Special Services for Disadvantaged Students (SSDS) Program: 1979-80 Academic Year

John E. Coulson
With
Clarence Bradford and
Judith Kaye

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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Howard Sandler
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Project Directors Serving as Consultants

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EXECUTIVE SUMMARY

NATIONAL EVALUATION OF THE SPECIAL SERVICES FOR DISADVANTAGED STUDENTS (SSDS) PROGRAM

BACKGROUND

This report describes the federally funded Special Services for Disadvantaged Students (SSDS) program as it existed during the 1979-1980 academic year in postsecondary educational institutions across the country, and summarizes the SSDS program's short-term impact on freshman students who received special services from the program in that year. A follow-up survey, to be conducted in the Fall of 1981, will be separately reported in mid-1982; that survey will attempt to determine longer-term program impact on the same sample of students, many of whom will then be in their junior year in their colleges and universities.

The Higher Education Amendments of 1968, as further amended in 1978 (P.L. 94-482), authorized the Special Services for Disadvantaged Students Program, and defined its functions as:

> Programs of remedial and other special services for students with academic potential who are enrolled or accepted for enrollment at the institution...and who, by reason of deprived educational, cultural or economic background, or physical handicap, are in need of such services to assist them to initiate, continue, or resume their postsecondary education or by reason of limited English-speaking ability are in need of bilingual educational teaching, guidance, and counseling in order to enable them to pursue a postsecondary education.

SSDS gives project grants to selected institutions of higher education that have applied for funds under a competitive award system. In FY 1980, a total of $60 million was appropriated for SSDS.

Within the general design framework of the SSDS regulations, projects vary widely in the services that they provide, their methods of selecting student participants, their funding levels, and the numbers of students they serve.

The national evaluation of the SSDS program is being conducted by System Development Corporation under a contract from the Education Department's Office of Program Evaluation. One goal is to describe a national sample of SSDS projects, and the institutions in which those projects operate, and to characterize samples of students having different levels of participation in project activities. A second goal is to determine the impact of project participation on students' persistence (completion of the academic year), progress (courses attempted and completed), and performance (grade point average). This second goal is given somewhat less emphasis in the present report because the most important program benefits are likely to require two or three years to show their full impact. As noted earlier, a follow-up phase will assess longer-term impact.

OVERVIEW OF KEY FINDINGS

Although the study and surveys are not yet complete, certain important findings relevant to policy are beginning to emerge. These should be taken as preliminary now--to be further investigated after the follow-up survey has been conducted. The key findings are that:

- SSDS services are being focused, as intended, on economically and educationally deprived students.
- There is some evidence of beneficial program impact on participating students.
    - Students receiving a full range of SSDS services are more likely to persist through their freshman year (the only year covered by this report) than are students receiving few or no services.
    - Students receiving more services are likely to attempt and to complete more course units.
    - Students receiving a full range of SSDS services have lower grade-point averages than students receiving fewer services, but this appears to be a selection effect rather than a negative effect of the services, i.e., projects tend to concentrate services on students with poorer entry skills.

  - Minority and low-income participants receive lower grade-point averages than others, and take fewer course units, but their persistence through the freshman year is no less.
  - Students receiving more financial aid are more likely to persist through their freshman year, and tend to attempt and complete more course units and to obtain higher grades. (SSDS projects do not provide or directly arrange financial aid for students, but they may refer students to potential sources of aid.)

- With regard to SSDS project characteristics:
  - Most Project Directors are quite experienced, and tend to be members of minority groups, with more than half of them Black.
  - Many projects have relatively small numbers of regular professional staff members, most of whom are fairly experienced, augmented by substantial numbers of students who work part time as tutors, peer counselors, etc.
  - The average project has 414 participating students, approximately 70 percent of whom are of minority groups, and a total annual budget of around $132,000. Some projects receive funding from state and/or local sources, but on the average, Federal funding accounts for almost 80 percent of the total project budget.
  - Most projects provide services during the summer as well as during the regular academic year.
  - The average participating student receives some type of project service 14 times during the academic year, and has an average total participation time of about 14 hours. Larger projects tend to have lower average costs per student hour of services. About half the project students receive tutoring; their average total amount of tutorial time over the academic year is about 9 hours. Approximately a third of the project students receive special group instruction; the average total period of such instruction for this subgroup is around 20 hours. Roughly two-thirds of participating students receive counseling and three-fourths receive orientation and/or cultural-relations services, but the total duration of such services over the year is typically quite small (e.g., one to four hours).

METHODOLOGY

The study focused on a nationally representative sample of 58 mature projects (projects in continuous operation for at least three years including the study year). For reasons of cost-effectiveness, the sampling universe was defined to exclude vocational/technical schools, institutions located outside the 48 coterminous states, and projects whose services were designed exclusively for the physically handicapped; however, these excluded institutions collectively accounted for only about 5 percent of all host institutions.

The sample from each site comprised up to 200 students (180 freshmen and 20 of other levels) judged by the project to be eligible for project services. Some of the eligible students were already known to be participating in project activities at the time they were selected; others were not yet participating, but might in the normal course of events participate before the end of the academic year. All projects were told that they should apply their normal procedures for selection of students to receive services, without regard to whether those students were in the study sample. Thus, the study used a natural variations design in which a particular sample student's pattern of participation in project services could be defined only at the conclusion of the academic year. The major purpose of including students with different participation levels (including some students who never participated in any special services) was to determine whether students with higher participation levels performed differently on the various outcome measures than those with lower levels. A secondary purpose was to learn whether students' background characteristics such as economic status were related to the levels of special services they received.

Project and institutional data were collected by mail surveys and face-to-face interviews administered to SSDS Project Directors and to institutional administrators once during the academic year, as well as by questionnaires administered once to a sample of institutional faculty members. Student data were collected by mail surveys administered to the sample students at the beginning and end of the academic year, and by student transcripts collected at the end of the year. Although not all students responded to the questionnaires, analysis revealed no important bias introduced by non-responses or by sample attrition. In addition, SSDS project staff members completed a participation record every time any student or group of students received some type of project service; these records were maintained for all participating students in the sample institutions.

This report's analyses of project impact are focused exclusively on students who were freshmen in the study year, because such students provide the best opportunity for follow-up surveys planned for the students' junior and possibly senior years.

RESULTS

Project Context and History

Of the host institutions represented by this study, about 4 percent were private 2-year colleges, 33 percent were public 2-year colleges, 20 percent private 4-year colleges or universities, and 43 percent public 4-year institutions. Better than two-thirds of the institutions had over 50 percent White students; in 30 percent of the institutions, Whites accounted for at least nine-tenths of the total enrollments. About 30 percent of the institutions had over 50 percent Black students. Only 13 percent of the institutions had over 10 percent Hispanics, and over a third reported no Hispanic students.

Most projects had grown considerably over the last three years in their numbers of staff members, numbers of participating students, and funding levels. The largest percentage growth was in staff size, probably because of the projects' increasing use of peer (student) tutors. Staff turnover over the three years was fairly high, with over a fourth of the projects experiencing more than a 25 percent annual turnover rate.

Project Directors' Characteristics

Most Project Directors reported more than five years' relevant experience. Few Project Directors served full-time in this capacity, though most of the nonproject activities reported were closely related to the functions served by

SSDS. Blacks constituted the largest group of Project Directors (almost 55 percent) and Whites the second largest group (32 percent). In general, projects with larger percentages of minority-group faculty members in the host institutions had a higher probability of having minority-group Project Directors.

Project Staff Characteristics

On the average, projects had slightly over 35 staff members, but only 14 percent of these worked full-time for the projects. Among staff members working half-time or more for their projects, better than three-fourths had at least two years' prior experience in providing similar services. There was considerable variation among the half-time-or-better staff members in educational level. Over a fourth had a graduate degree, but almost another fourth had only a high school diploma; most of the latter group of staff members were students in the institutions. Around 46 percent of the project staff members were minority group members, compared with 10 percent minority faculty members in the host institutions.

Characteristics of Participating Students

The average number of participating students in sample sites was 414. About 49 percent of all participating students (clients) in the mature projects represented by this study were Black, 29 percent White, 17 percent Hispanic, and 5 percent other racial/ethnic groups. These figures compare with institutional student body figures for the same year of 20 percent Black, 71 percent White, 6 percent Hispanic, and 2 percent students of other racial/ethnic groups. The most common eligibility criteria satisfied by participating students were those of low family income and educational need. Rarely indicated criteria included cultural need, physical disability, and limited English-speaking ability.

Project Resources and Allocations

Project budgets averaged $132,000 but varied greatly, with the smallest running around $25,000 and the largest around $425,000. Many projects received funding from multiple sources. all received Federal funds, at an average level of about $106,000. About 30 percent received state funds and 28 percent received funds from other sources such as local contributions; the average dollar amounts, among projects receiving such contributions, were about $56,000 and $33,000 for state and "other" funds, respectively. As the total project budget increased, the percentage of that total accounted for by Federal dollars tended to decrease. Above the $325,000 level, in fact, Federal funding accounted for substantially less than half the total project budget. Most projects also received free in-kind aid from their host institutions, e.g., office or classroom space, free instructional services, clerical assistance, office supplies, etc.

Projects spent almost as much of their state and Federal funds for administrative costs as they spent for actual service delivery. By contrast, twice as much of the "other" funds were spent for service delivery as for administrative costs.

Projects' Administrative Policies and Procedures

Over 80 percent of the Project Directors reported that their projects used the registrar's or admissions office to identify eligible students. The most important sources used by students to learn of project services were other participating students and student service organizations in the institutions. Student needs for specific services were generally identified through staff interviews with students, by staff evaluation of students' academic records, and by the students' own requests. In general, students' participation in project services was usually voluntary, and there were few formal project policies concerning when services to a student should be ended.

Project Directors were asked who had the decision authority on various kinds of decisions directly affecting the project operations. In two areas--hiring and firing of project staff, and project budget allocations--decision authority was reported by sizable percentages of the Project Directors to lie outside the projects, i.e., with institutional administrators.

Projects' Summer Activities

Practically all of the institutions (96 percent) had some form of summer school. Seventy-two percent of the SSDS projects reported summer project activities, which generally included counseling, needs assessment, and referrals to other agencies. Less commonly included were instructional services, orientation services, and cultural services. Budgets for project summer activities averaged only around $17,000, and involved only around eight or nine staff members (mostly part-time) and about 50 participating students.

Interactions Between Projects and Institutions

Project Directors indicated that the four most important goals for their projects were "Remedying academic deficiencies of disadvantaged students," "Developing students' academic/cognitive skills" and "Giving each student individual attention." Some Project Directors perceived large disparities between the goals of the SSDS projects and those of the host institutions. These perceptions, if accurate, point to a source of possible competing interests between the projects and the institutions in the setting of institutional policies affecting the projects.

Project Directors' Interactions With Institutions and Role in Institutional Decision-Making

Most Project Directors viewed themselves as active participants in institutional decisions impinging on their projects, with almost three-fourths saying that they participated "to a large extent" or "to a considerable extent." Further, they perceived themselves as being influential in the outcomes of these decisions; four-fifths of the Project Directors felt they had "considerable" or "major" influence. These perceptions appear to conflict with the fact that few Project Directors reported themselves to be members of many institutional committees, councils, or advisory boards, yet these organizations are the very types that usually play strong roles in shaping institutional policy.

Institutional Responsiveness to Project Needs

Most Project Directors reported that their host institutions were responsive to project needs, though many qualified this appraisal in some fashion. They indicated that project students were often given special (lenient) treatment on dismissals, and fairly often on admissions standards and probation. Institutions having more special policies for project students were more likely to be viewed as responsive.

Perceived Project Impact on Institutions and Students

Regular (non-SSDS) faculty members perceived a substantial amount of project impact on their host institutions. The maximum impact in the private 4-year institutions was felt to be on the institutions' administrations, whereas in other institutions it was believed to be on the student bodies.

Institutional administrators perceived little project impact on the institutions' admissions, probation, or retention policies for their general student bodies, but most said that there was beneficial impact on the project students' academic performance and skills, their social/personal skills and self-concept, and their adjustment to the campus environment.

Services Provided by Projects

Across SSDS projects, the average participating student received some type of project service 14 times during the academic year, for an average total participation time of about 14 hours exclusive of the project staffs' preparation time. The average ratio of participating students to project staff providing the services was 17.6 to 1, but ratios varied widely across projects. Projects with larger budgets and larger staffs tended to serve larger numbers of students, and also to provide more total service hours. The average cost per student hour of services generally decreased as the per-participant service hours increased, indicating an efficiency of scale for large project efforts.

Instructional Services

Most projects offered both group instruction (independent of regular credit courses) and tutoring. Overall, about half the project students received tutoring, and 31 percent received group instruction. Among those students who received tutoring, the average tutoring time over the academic year was 9 hours; the average group instruction time for students receiving such instruction was almost 20 hours. Both of these distributions were highly skewed, however, with the bulk of projects concentrated in the region of low service hours. Projects varied widely in their percentage of total service time devoted to each of these modes of instruction.

Although many projects offered tutoring in a variety of subjects, English and mathematics were the only subjects in which any substantial numbers of students were tutored. Among students who were tutored, the average tutoring time over the academic year ranged from a little under 4 hours in social science to more than 7 hours in mathematics. In group instruction, the most common topics were English, mathematics, and science/engineering, with humanities and social science courses provided by substantially fewer projects. Among students receiving group instruction, the average number of hours received ranged from just over 6 (humanities) to 19 (English).

Counseling, Referrals, and Needs Assessment

Counseling, as defined here to include the related activities of needs assessment and referrals of students to other service agencies, was a major SSDS activity, with almost all projects offering one or more types of counseling. Furthermore, over two-thirds of the students in projects offering counseling services received some type of counseling, with the greatest emphasis being on academic counseling. However, the actual numbers of hours provided over the academic year to a typical participating student were quite small, ranging on the average from just over one hour (career counseling) to two hours (academic counseling).

Orientation and Cultural Services

As defined here, "Orientation" refers to project activities undertaken to familiarize entering students with certain aspects of campus and project requirements and resources. "Cultural Services" include project efforts to expand students' awareness of their own or other cultures. Overall, roughly three-fifth to four-fifths of the projects offered orientation and/or cultural services, and a fourth to a third of the students received such services. The mean amount of orientation time, among students receiving such services, was about 1½ hours; the corresponding figure for orientation services was about 4½ hours.

Characteristics of Eligible Students, and Their Relationships to Services Received

Characteristics of Eligible Freshman Students

Most SSDS-eligible freshman students in this study reported that their parents or guardians had total yearly incomes of less than $12,000. Overall, the eligibility criterion most commonly met by students was that of educational deprivation, and the second most common was economic background, with many fewer students being reported eligible by reason of cultural background.

Roughly a fifth of the sample freshman students were receiving educational loans from a bank, the State, the Federal government, or some other source; their average loan amount was a little over $1,000. Approximately half of the students were receiving a Pell Grant (Basic Educational Opportunity Grant). Much smaller percentages received Federal Guaranteed Loans or National Direct Student Loans.

Fairly large percentages of the students received grants, scholarships, and/or tuition waivers. These percentages varied with parental income level and type of host institution, ranging from about 20 percent to 58 percent. Some students (from 23 percent to 52 percent depending on parental income level and type of institution) also received financial contributions from their parents; the average levels of these contributions ranged from $260 to $763. Finally, about a third of the students overall held jobs during the academic year, with average earnings of around $2,500.

Relationships Between Student Characteristics and Services Received

For all types of project services, the percentage of lower-parental-income students receiving those services was higher than the percentage for students with higher-income parents. Thus, overall, the data appear to indicate a targeting of project services to the less affluent students among those deemed eligible for SSDS services. Further evidence of targeting of services was the fact that lower-skilled students (as self-perceived at the start of the year) tended to receive more hours of project instruction.

Effects on Students of Participation in Special Services

Two sets of student outcome measures were examined. One set, taken from transcripts, included the students' *persistence* (whether they were still enrolled at the end of the year), their *intensity* of efforts (how many course units they attempted), their *progress* (course units completed), and their *performance* (grade point average). Another set, derived from the student surveys, included measures of changes occurring during the academic year in the students' educational aspirations and expectations, their job expectations, their self-perceived skill levels, and their self-perceived education-related problems. Since none of the second set revealed any consistent or interpretable relationships with participation data or program characteristics, the present summary will focus on the transcript-derived outcome measures.

Patterns of special services provided to students constituted one of the most important predictors in determining the students' persistence in their academic studies, the number of course units they attempted, and the number of units they completed. In all three of these cases, the relationship was positive, i.e., more services were associated with more favorable values on the three outcome measures. Students receiving the full range of SSDS and SSDS-like* services examined here had predicted odds of persisting (staying enrolled through the freshman academic year) 2.26 times the odds for students who received no such services. The analyses for course units attempted and completed, while less dramatic, nevertheless showed the SSDS and SSDS-like services to have been among the stronger predictors of these student outcomes.

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*The term "SSDS-like" reflects the fact that in some institutions, funds from several sources were pooled in a single special-services project. In such cases it may be impossible to determine whether the services provided to a particular student at a particular time are being paid for by SSDS or some other program. The goal of this study, in any case, was to identify successful practices that could be emphasized in future SSDS projects to improve the effectiveness of the overall SSDS program.

Surprisingly, at least on first consideration, full-service participation by students was associated with lower grade point averages. For example, the mean GPA for students in the two profiles representing the largest amount of received services was 2.25, whereas that for students in the two profiles representing the least services was 2.38. However, it is likely that this finding simply reflects the fact that students with poorer educational background and poorer entry skills tend to be given more special services. In any event it is probably realistic to consider persistence as the most important outcome measure, and then courses attempted and completed as the next most important, at least for the first academic year or two. If students do not stay enrolled and complete courses, any benefits they might derive from the college experience are greatly limited automatically. Conversely, if they do stay enrolled and complete courses, even if their grades are poor, their potential benefits remain high and the institution/project continues to have an opportunity to help those students achieve their educational goals. From this point of view it can be argued that the types of services provided by SSDS projects were valuable to participating students despite the negative relationship found between amount of services and grade point average in the students' freshman year.

Among the other potentially manipulable variables of special policy interest, institutional acceptance of (regard for) project students was positively associated with the numbers of course units attempted by and completed by students. However, it is not possible to demonstrate the direction of causality, if any causality exists.

Monetary incentive (grants and waivers received by the students) was one of the best overall predictors when all four transcript-based outcome measures are considered. Students receiving larger amounts of such aid tended to have higher levels of persistence, course units attempted, units completed, and grade point averages.

Among the conditioning variables used in the analyses (i.e., variables whose possible effects on the outcomes should be taken into account, but which are not generally under the control of the projects), student ethnicity and type of institution were the strongest predictors. Minority group members tended to attempt and complete fewer course units, and to make lower grades. However, minority students were as likely as White students to stay enrolled through the academic year.

Size of the institutions' enrollment showed fairly large negative associations with course units attempted and completed. That is, SSDS-eligible students in larger institutions tended to take and complete fewer courses.

Finally, students having more affluent parents attempted and completed more course units, and received higher grade point averages. However, student financial incentives (grants and tuition waivers) were apparently highly effective in offsetting the negative effects of poverty backgrounds for some students; such incentives were stronger predictors of course units attempted and completed, and of grade point averages, than the level of parental income, at least within the income range found in this study.

CHAPTER 1. INTRODUCTION AND BACKGROUND

This report describes the federally funded Special Services for Disadvantaged Students (SSDS) program as it existed during the 1979-1980 academic year in postsecondary institutions across the country, and summarizes the SSDS program's impact on participating students. More specifically, the present report addresses the following questions:

- What kinds of students participate in SSDS projects, and what special services do they receive?
- What kinds of postsecondary institutions have SSDS projects?
- How do SSDS projects operate, how do they allocate their resources, and what are their staff characteristics?
- What short-term impact does SSDS have on participating students' academic performance?
- What types of SSDS activities are most beneficial to participating students?

While this report does deal with the issue of program impact, its major emphasis is on descriptive issues--on characterizing the SSDS projects and the services that those projects provide to participating students. The reason for this descriptive focus is that the most important program benefits (e.g., improved student retention and number of courses completed) are likely to require two or three years to show their full impact. Earlier studies of SSDS and similar programs have shown the difficulties of detecting impact within a single year. The study reported here deals with only one year, and is thus concerned with short-term effects. A follow-up phase of this study, not described in the present report, will address the longer-term program effects on students who received SSDS services starting in AY 1979-1980, as evidenced by student transcripts and questionnaires to be collected in 1981. The final report for this later phase, scheduled for June 1982, will deal with issues of program impact in considerably greater depth than the present report.

The remainder of this chapter is organized into two sections. First, an overview is given of the background, purpose, and activities of the SSDS program. Then, the context, goals, and scope of this evaluation are discussed.

A. Overview of SSDS Program

The Higher Education Amendments of 1968, as further amended in 1978 (P.L. 94-482)* authorized the Special Services for Disadvantaged Students Program, and defined its function as

> programs of remedial and other special services for students with academic potential who are enrolled or accepted for enrollment at the institution. . . and who, by reason of deprived educational, cultural, or economic background, or physical handicap, are in need of such services to assist them to initiate, continue, or resume their postsecondary education or by reason of limited English-speaking ability are in need of bilingual educational teaching, guidance, and counseling in order to enable them to pursue a postsecondary education.

SSDS gives project grants to selected institutions of higher education which have applied for funds under a competitive award system. In FY 1978, a total of $49 million was appropriated for SSDS; in Fiscal Years 1979 and 1980 the figures were $55 million and $60 million, respectively. In the 1979-80 academic year, grantees included 131 public 2-year colleges, 11 private 2-year colleges, 243 public 4-year and 129 private 4-year colleges and universities, 27 vocational-technical schools, 15 agencies, and one consortium.

Based on program records for all SSDS projects in 1978-79 (the latest year on which data are available), 491 projects that year served a total of 148,000 students; of these, approximately 63,000 were Black, 25,000 Hispanic, 50,000 White, and the rest of other racial/ethnic groups. Major categories of project activities recorded for that year included:

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*These provisions were again modified in 1980 (P.L. 96-374), but the 1978 amendments were the version in force at the time the study was conducted.

Special Activities for Physically Disabled
Student Orientation
Academic Counseling
Personal Counseling
Career Counseling
Skills Center
Reentrance Counseling
Graduate Counseling
Tutoring
Curriculum Development
Reading Skills
Drug Abuse Prevention

Each SSDS grantee (host institution) may provide a different set of SSDS activities within the design framework of the regulations. Projects also vary in their methods of selecting student participants, with some projects actively seeking to identify students who meet certain eligibility criteria and then encouraging their participation, while other projects publicize their services but leave it more to the students to seek those services.

In short, SSDS projects operate under reasonably broad legislation and regulations; within those regulations, they vary widely in their mix of services provided, their funding levels and use of those funds, and their methods of selecting students to receive SSDS services. It is also important to note that many host institutions have a number of different Federal, state, and locally funded programs designed to help disadvantaged students, and such programs frequently offer services similar or identical to those provided by SSDS. Funds from these various sources are often combined by an institution in a manner that makes it extremely difficult to ascertain which services received by a given student are supported by what program or set of programs. Typically, an institution's "project," as the term is used in this report and by the institutions themselves, is not a pure SSDS-funded project but a composite supported by multiple programs. The perspective of this report takes into account the full range of SSDS-like services received by students in the evaluation, regardless of the funding source.

B. Background, Goals, and Scope of Study

The national evaluation of the SSDS Program is being conducted by System Development Corporation for the Education Department's Office of Program Evaluation (OPE) under Contract 300-78-0356. OPE's major function is to evaluate federally funded education programs, and the present study was approved in the OPE Evaluation Plan for FY 1978.

The only previous national study of SSDS was performed by Educational Testing Service and Research Triangle in 1971. At that time the SSDS Program has been operational for only one year, and no program regulations had been issued; thus the program and the projects were still in the process of organizing and defining the services to be delivered. In addition, the study did not identify which sample students were SSDS project participants, so that it was not possible to compare the educational outcomes for students receiving different levels and types of SSDS services. The present study, as discussed below in Chapter 2, places considerable stress on obtaining accurate and comprehensive records of the types and levels of services received by each sample student from an SSDS project.

As noted earlier, the emphasis in this report is on descriptions of SSDS projects and the environments provided by the host institutions. The report describes the projects in terms of client characteristics, staffing patterns of services offered and actually provided to participants, project resources, and procedures and materials utilized for needs assessment. The study also describes the institutional environments in terms of the student body composition, faculty and administrative composition, support services, and resources. Finally, several outcome dimensions are examined for evidence of possible short-term SSDS Program impact. These include students' grade point averages; courses attempted and successfully completed; dropout rates; the perceptions of students, faculty, and institutional administrators concerning the SSDS projects' beneficial effects; and reported project effects on the institutions themselves.

As further discussed in Chapter 2, the student sample for the impact analyses consists of individuals who were entering freshmen in the 1979-1980 academic year. The decision to focus the impact study's resources on the freshman level was designed to maximize the number of sample students who would still be in postsecondary institutions during follow-up data-collection efforts scheduled for 1981-82 and possibly 1982-83; this, in turn, was intended to increase the potential sensitivity of the study to any longer-term program impact on the students' academic performance.

CHAPTER 2. STUDY DESIGN AND METHODOLOGY

This chapter describes the study's methodology, including the sampling design, the data-collection instruments, and the procedures used to administer those instruments. First, a brief methodological overview (Section A) is presented. This overview is intended to give non-technical readers, and readers who simply want to know the study findings without getting into procedural details, enough contextual information to interpret those findings. For those who wish to know more about the study's methodological underpinnings, Sections B through E discuss in somewhat greater depth the sampling procedures; the data-collection instruments and procedures; rates of missing data, and potential effects of the missing data on data quality; and certain procedures followed in this document's reporting of the study findings.

A. Design Overview

As noted in Chapter 1, this study has two general objectives: to describe a national sample of SSDS projects, the institutions in which those projects operate, and samples of students having different levels of participation in project activities; and to determine the impact of project participation on students' persistence, progress, and performance. To meet these objectives a two-stage sampling procedure was used, with the first stage being the selection of a nationally representative sample of 58 mature projects (projects in continuous operation for at least three years including the study year), and the second being the selection from each site of a sample of up to 200 students judged by the project to be eligible for project services. Some of those eligible students were already known to be participating in project activities at the time they were selected; others were not yet participating, but might in the normal course of events participate before the end of the academic year. All projects were told that they should apply their normal procedures for selection of students to receive services, without regard to whether those students were in the study sample. Thus, the study used a natural variations design in which a particular sample student's pattern of participation in project services could be defined only at the conclusion of the academic year.

This is in contrast to experimental or planned variations designs where students are assigned to "treatment" (participation) or "control" (non-participation) conditions by the evaluators or by some randomized selection procedure.

Project and institutional data were collected by mail surveys and face-to-face interviews administered to SSDS Project Directors and to institutional administrators once during the academic year, as well as by questionnaires administered once to a sample of institutional faculty members. Student data were collected by mail surveys administered to the sample students at the beginning and end of the academic year, and by student transcripts collected at the end of the year. In addition, SSDS project staff members completed a participation record every time any student or group of students received some type of project service; these records were maintained for all participating students in the sample institutions, not simply for those students in the study sample.

In reporting the data, all project-level and institution-level statistics are weighted to provide estimates of the population parameters for the 333 institutions/projects from which those samples were drawn. All student-level data are unweighted, however, as it would have placed an excessive burden on the projects and institutions to provide the information necessary to determine sampling fractions for the student subpopulation from each institution. This report's analyses of project impact are focused exclusively on students who were freshmen in the study year, because such students provide the best opportunity for follow-up surveys planned for the students' junior and possibly senior years.

B. Sampling

The sampling procedures were designed to provide a representative sample of SSDS projects, and of students eligible for project services, in order to describe the national SSDS program, to assess the impact of the program, and to measure variations in this impact due to differences in individual projects. Sampling was conducted in two phases. The first phase was the selection of a nationally representative sample of postsecondary institutions hosting SSDS projects, and the second was the selection of three samples of students enrolled in each sampled institution: a sample of SSDS-participating freshmen, a sample of eligible, but (at the time of selection) non-participating freshmen, and a sample of SSDS-participating students at levels other than the freshman level.

The purpose of the two-phase evaluation sampling process was to determine the projects, the host institutions, and the students within those institutions who would be studied in the SSDS evaluation. Stratified random sampling procedures were used to select the evaluation sites; these procedures helped to ensure that the final sample would be representative of the population of interest, that it would yield reliable estimates of the programs' characteristics and impacts, and at the same time would not put an undue burden on the projects themselves. The procedures used in selecting the institutions/projects are further described below.

The second phase of the sampling was the selection, from each sample institution, of up to 100 freshman SSDS participants, up to 80 comparable freshmen who were eligible for SSDS participation but who were not participants at the time of selection, and approximately 20 SSDS project participants who were not freshmen.* These three samples consituted the sets of students from whom Student Surveys (questionnaires) were collected. Only the two freshman samples (SSDS-participating freshmen, and eligible, but non-participating freshmen) were used for the impact and relational analyses in this evaluation; for this reason, these samples are referred to here, collectively, as the "impact sample."

1. Institutional Sampling Design and Procedures

The study population was defined to include only "mature" SSDS projects that had been funded for AY 77-78 and AY 78-79, as well as for the evaluation year, AY 79-80. This constraint was intended to avoid premature and possible unfair evaluations of projects that were still in their developmental phases. In addition, the study population was limited by cost considerations to projects located in institutions within the coterminus states and the District of Columbia. A third restriction on the study population excluded the projects serving only the physically handicapped, as these were felt to be distinctly different from the rest of the projects; however, projects that served some handicapped students under one of several program components were not excluded. Finally, projects in vocational or technical institutions were excluded, as there were only three such projects and the cost of representing them adequately in the study sample would have been disproportionately high in relation to their share of the total SSDS resources. These restrictions defined the study population as a set of 333 projects, from which the sample sites were to be drawn.

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*The sampling and the subsequent analyses emphasized the freshmen for two reasons: first, most of the projects focused most of their resources on their freshman participants and, second, since the present evaluation represented the first year of a longitudinal study, the freshman samples gave the best base for follow-up.

A stratified random sampling approach was used to select the sample projects. Based on data from several different sources, a total of 18 institutional and projects variables were examined for possible policy relevance and were also subjected to quantitative analyses (cluster analysis, and analysis of variance) to select a final subset of three stratification variables. One stratification variable was the host institution's type of control (i.e., public or private funding), and a second was the institution's highest offering (two years vs. four years or more). These two variables were selected because they are related to the types of students, the students' academic backgrounds, and their financial needs at the host institutions. The third stratification variable selected was the racial/ethnic composition of the project's participating students; this variable was chosen because analysis of variance showed it to be significantly related to differences in the project participants' dropout rates in an earlier academic year, and thus might also be related to this study's outcome measures. The three groups formed by the third variable were projects with 45 percent or more Black participants; projects with 45 percent or more Hispanic, American Indian, or Alaskan native participants; and projects where no minority ethnic group comprised as much as 45 percent of the total.

An analysis of the candidate universe revealed that almost half of the projects expected to have fewer than 100 participating freshmen. Since these projects were in general smaller, and had less funding, it seemed likely that they might differ in certain characteristics that the evaluation sought to measure. In addition, for analytic purposes it was important to have as large a number of participating students as possible--up to 100--in most of the sample projects. For these reasons, an indicator of whether each project was expected to have at least 100 participating freshmen was made an operational factor in the sample selection. Specifically, projects with 100 or more anticipated participants were sampled at a higher rate than those with lower numbers of expected students. This tended to make the sample more representative, as it led to the sample's including more students from large projects than from small projects, and thus reflected the fact that most of the total population of project participants were located in the larger projects.

A total of 58 institutions/projects were selected for the study. Figure 2-1 shows how the sampling universe of 333 institutions and the 58 sample sites distributed themselves among the sampling strata and substrata. It will be noticed that some of the substrata were collapsed because of empty or almost empty cells.

2. Student Sampling

This second phase of the sampling was designed to select approximately 200 students within each of the sampled institutions: a random sample of 100 freshmen who were participating in the SSDS project at the institution; a sample of 80 freshmen who were eligible for SSDS services, and comparable in general background to the participating freshmen, but who were not participants at the time of selection; and, finally, a sample of 20 participants who were not freshmen. The procedures for selecting these within-institution samples are detailed below.

In September 1979, each sampled project was asked to complete a Form for Listing SSDS Eligibles and Participants. One list provided by the project included all of the freshman students who were receiving or had received SSDS services

STRATA AND SUBSTRATA DESCRIPTION			POPULATION CELL SIZE	SAMPLE SIZE
Public 4-Year+	Predominantly Black	Under 100 Freshmen	29	3
		100 Freshmen or More	39	10
	Predominantly Other Minorities	Under 100 Freshmen	9	1
		100 Freshmen or More	9	5
	No Dominant Minority	Under 100 Freshmen	40	4
		100 Freshmen or More	26	6
Private 4-Year+	Predominantly Black	Under 100 Freshmen	30	3
		100 Freshmen or More	12	3
	Not Predominantly Black	Under 100 Freshmen	22	2
		100 Freshmen or More	3	2
Public 2-Year	Predominantly Black	Under 100 Freshmen	24	2
		100 Freshmen or More	24	6
	Not Predominantly Black	Under 100 Freshmen	34	3
		100 Freshmen or More	20	5
Private 2-Year	All Projects	Under 100 Freshmen	9	1
		100 Freshmen or More	3	2
		TOTALS:	333	58

Figure 2-1. Institutional Sampling: Summary of Final Strata, Cell Sizes, and Sample Sizes

at the time the form is completed. The second list included up to 180 freshmen at the institution who were eligible for SSDS services--and who were generally comparable to the freshman participants--but who were not receiving SSDS service. The third list included up to 80 participating students who were not freshmen. In addition to this information, the project specified which eligibility criteria each student met, and provided a three-point rating of the amount of SSDS service the student needed.

The student samples for each institution were selected from these lists. Within each institution, the list of SSDS-participating freshmen was stratified into 64 categories based on their eligibility criteria. This 64-category scheme was defined by the cross-classification of five indices representing the eligibility criteria with those representing institutional attributes (see Figure 2-1). A four-level index for the deprived economic background criterion had categories for students who had no, low, moderate, and high economic needs. For each of the four remaining eligibility criteria (the limited-English speaking ability, the physically handicapped, the deprived cultural background, and the deprived educational background) there was a dichotomous index that identified students meeting the particular criterion.

Using the above definitions, a stratified random sample of 100 participating freshmen was selected from each institution having at least that number of such participants. The same stratification was applied to the list of eligible, but non-participating freshmen at that school; from this list, a sample of 80 non-participant freshmen was selected so as to approximately match the distribution of participating freshmen from that school. From the list of participating non-freshmen, a simple random sample of 20 was selected.

In some institutions there were insufficient numbers of participating and/or eligible freshman students to apply the sampling procedures described above. In such cases, all students meeting the selection criteria were included in the study. Also, because of differences in the institutions' opening dates, some projects sent their lists of participating and eligible students earlier than others. Finally, some projects could not identify adequate numbers of participating freshmen early in the academic year, and were allowed a more extended time period for providing the required lists of students; approximately 75 percent of the projects sent their lists by mid-November, while the remaining projects required up to mid-December.

C. Data-Collection Instruments

Data for this study were collected using mail questionnaires, interviews, and several recording forms that were completed by SSDS project staff in the 58 sample sites. More specifically, the following instruments were used:

- Student Surveys mailed to a sample of freshman students (the "impact sample" described above in Section B) in the Fall of 1979 and again in the Spring of 1980. The Fall Survey asked about the students' educational and personal backgrounds and experiences, their recent educational performance and aspirations, their (self-perceived) academic abilities, the types of problems they had encountered in the postsecondary institutions, and the types of SSDS-like services they were receiving within the institutions. The Spring Survey repeated some of the questions about the students' academic abilities, their educational and occupational aspirations and expectations, and the problems encountered, so as to provide indices of change in those dimensions over the academic year. In addition, a new set of questions in the Spring Survey elicited information about the students' educational expenses and their sources of funding to meet those expenses.
- A Project Director Survey and a Project Director Interview. The Survey, mailed to Project Directors in the Fall of 1979, was designed to obtain information about the Directors' personal and academic backgrounds, their prior relevant experience, and the SSDS projects' staffing patterns, budgets, and operating policies and procedures. The Interview, administered by SDS staff in the Winter of 1979-80, elicited the Directors' perceptions of the projects' goals and impact, their relationships with the host institutions and the students served and the communication and decision-making practices within the projects and between projects and host institutions.

- An Institutional Survey and an Institutional Interview. The Survey was mailed in the Fall of 1979, to the institutional administrator at each sample site responsible for the SSDS project and similar programs on campus. It requested information regarding the institutions' types of programs or services (outside of the SSDS projects) provided to disadvantaged students; the funding levels and revenue sources for such services; the student body composition in terms of ethnicity/race, family income levels, and sex; the faculty and administrative staff composition; and the institutions' policies regarding admissions, probation, retention, and graduation. The Institutional Interview, administered in the Winter of 1979-80 to the administrator responsible for academic policy, was used to obtain information about the institutions' goals, the character of the relationships between SSDC projects and their host institutions, and the administrators' perceptions of how the projects had affected the institutions, their policies, and their practices.

- A Faculty Survey, mailed to ten non-SSDS faculty members in each host institution who were nominated by either the SSDS Project Director or an administrator of the institution. This instrument requested information regarding the faculty members' previous experience in assisting disadvantaged students, their interactions with project students, and their perceptions of the projects' impact on participating students and on the institutions themselves.

- Student Participation Records completed by project staff members every time one or more students received some type of service from a project. Unlike the Student Surveys, which were collected only for eligible freshman students in the impact sample, these records were completed for all students in the institutions who received project services. Each record included the name(s) of the student(s) receiving the service, the name(s) of the staff member(s) providing the service, the specific nature of the service (individual academic counseling, group instruction, etc.) and the time duration of the service. Four types of record forms were used, depending on the service being recorded: an Instructional Services Records; a Record of Needs Assessment, Counseling, and Referral Services; a Record of Orientation Services; and a Record of Cultural Services.

- An Eligibility List on which projects were asked at the start of the academic year to list freshmen eligible to receive project services. This form also asked for information about the project eligibility criteria met by each student and the students' relative level of need for project services.
- Transcripts requested at the end of the academic year from host institutions for all freshman students in the impact sample. Information used from these transcripts included the students' courses attempted and completed, their grade point averages, and their enrollment status (active or terminated) at the end of the year.

The general procedures used to develop all of these instruments (except, of course, the transcripts) included the following:

- Study goals originally defined in the Department of Education's Request for Proposal were refined and further explicated through interactions with a Policy Advisory Group and a special advisory panel of SSDS Project Directors.
- Based on the refined goals, more specific research questions were defined. These in turn were translated into a detailed list of data requirements.
- After a review of the data requirements by the Department of Education and the study's advisory groups, and an analysis of possible sources for each data requirement, preliminary specifications were prepared for a set of instruments designed to elicit the desired information.
- Draft instruments were developed, and again reviewed by the Department of Education and the advisory groups. In addition, small-scale clinical trials were conducted with the Project Director Survey and the Student Survey to determine the time requirements for respondents to complete the instruments under realistic field conditions and to identify potential problems in administering the instruments.

- Minor modifications were made to reflect the results of the clinical trials, and all instruments were then submitted for clearance to the Federal Educational Data Acquisition Council (FEDAC). After FEDAC clearance, the instruments were reproduced in preparation for subsequent data-collection activities.

D. Data-Collection Procedures and Data Quality

Data collection took place during and immediately following the 1979-80 academic year. The Eligibility Forms were collected from projects by mail at the beginning of the year, and provided the basis for selection of students in the impact sample. Most of the Student Surveys were collected at the beginning and end of the year, though as discussed below, efforts to obtain the Fall Survey were necessarily extended through much of the year. Project Director and Institutional Surveys were collected by mail in the Fall of 1979, while the Project Director and Institutional Interviews were administered and Faculty Surveys were distributed during site visits in the winter of 1979-80. Participation Records were collected by mail over the entire academic year, and student transcripts were requested at the end of the year.

In preparation for these data-collection efforts, one-day orientation workshops were held with directors of all of the participating projects in April 1979, to familiarize them with the general types of instruments and with the planned data-collection procedures, to answer their questions about the study, and to solicit their suggestions and comments regarding the plans. Then, in August 1979, detailed Procedures Manuals were sent to the projects, describing in more detail the instruments and the kinds of assistance being requested of the projects and their host institutions. Enclosed with the manuals were copies of the Eligibility List forms and of the Participation Records which were to be completed by the projects.

The site visits and interviews were conducted by regular SDC staff members with extensive experience in working with educational institutions and in a wide range of data-collection procedures including interviews and observations.

These data collectors participated in the orientation workshops for the Project Directors and also in the preparation of the Procedures Manuals.

Some additional discussion of the Student Surveys is warranted at this point, as their administration involved a number of stages covering a considerable span of time. The first mailing of the Fall Survey was in November 1979, several weeks later than originally planned because of delays in receipt of the Eligibles Lists from the projects, and the consequent delays in selection of the sample students. At the option of the Project Directors, the survey forms were sent directly to students participating in SSDS services, or to the Project Directors for distribution to the students; in the case of non-participating eligible students, all forms were sent directly to the students. A second survey mailing was sent in early December, 1979, to all students who had not responded to the initial mailing. Around 4,000 surveys had been received by that point. Finally, in January, 1980, when about 5,300 surveys had been received, arrangements were made with local site personnel to telephone remaining non-respondents, urging them to return their surveys. At the final count, approximately 6,600 Fall Surveys (61.8 percent of those initially mailed) were returned to SDC. The late receipt of some of those surveys clearly reduces their value for pre-post comparisons on outcome measures such as the students' educational expectations. Nevertheless, it was important to obtain as high a response rate as possible, regardless of the date of receipt, because the Fall Survey contained questions about students' background and demographic characteristics that were not repeated in the Spring Survey.

The Spring Student Survey was first mailed in late April, 1980, along with stipend checks to encourage students to complete and return the forms. A second mailing was sent to non-respondents in June, a third mailing in July, and telephone calls were made to remaining non-respondents in August. At the conclusion of those efforts, a total of about 5,800 surveys (54.6 percent of those mailed out) were received.

E. Reporting of Data From Projects, Institutions, and Students

In this report all project-level and institution-level statistics based on the 58 sample sites are weighted to provide estimates of the population parameters for the 333 institutions/projects from which those sample sites were drawn. To obtain these population estimates, the data for each site were weighted in inverse proportion to the sampling ratio for the cell from which that site was drawn. For example, the sample included 3 projects that expected fewer than 100 freshman participants and that were in public 4-year institutions with a predominantly Black student body (see Figure 2-1); the population cell from which that sample was drawn included 29 sites, so the sampling ratio was 3:29 and the weighting factor for those sample sites was 29:3. By contrast, all student-level data presented in this report are raw data, as in many cases no reasonable estimates of population parameters were available for the student variables.

In the interest of brevity and simplicity, most of the descriptive data are presented in pie charts, bar diagrams, or simple cross-tabulations, without accompanying inferential statistics (correlations, levels of significance, etc.). Wherever the text refers to a relationship between two variables, that relationship was statistically significant at the .01 probability level.

F. Data Quality

This section is concerned with data quality, as judged primarily by the amount of missing data and by available evidence concerning possible response bias introduced by the missing data. Missing data can be examined at two levels: the percentage of cases in which a given type of instrument was not returned by an intended respondent to SDC, and the number and types of items not completed within a returned instrument.

Considering the second of these two issues first, the general rule was that, if an instrument was returned at all, the data quality in that instrument was very high. All of the interviews of Project Directors and institutional administrators were 100 percent completed, and there were no indications of erroneous or miscoded responses. Responses on the Project Director and administrator surveys were over 98 percent complete, and there were no missing responses on any of the more important items. In the returned Faculty Surveys, all of the items were answered by at least 97 percent of the respondents.

Even in the Fall and Spring Student Surveys that were returned, response rates on the great majority of items were at least 95 percent. The exceptions to this general rule were a small number of sensitive or difficult-to-answer questions about the students' parents' income level and education (up to 11 percent missing data), and about the students' educational aspirations and expectations (10 percent or less missing data). Finally, the data from Student Participation records and student transcripts received by SDC were over 99 percent usable. In summary, the level of item completion, and so far as can be determined, the quality of the responses, was remarkably high for all of the returned instruments.

Turning now to the issue of the return rates for the instruments as a whole, those rates varied widely across the different types of instruments. For the Project Director and Institutional Administrator Surveys and Interviews, responses (instruments) were received for all 58 institutions/projects. Of 580 Faculty Surveys sent out, 481 (83 percent) were completed and returned. In 91 percent of the sample institutions, at least half of the solicited faculty members returned their surveys, and at least three instruments were received from every institution. Since the analysis plan called for the faculty responses to be aggregated within institutions, usable data were available for all projects. No estimates of sample bias can be made for the faculty members as no independent information is available concerning the sampling frame of faculty members.

Transcripts were desired for the 6,866 freshman eligibles who returned at least one Student Survey (Spring and/or Fall); however, 1007 (15 percent) of these students returned a form with their Surveys indicating that they did not wish their Surveys to be sent to SDC, and these requests were honored. Of the 5,859 transcripts requested of the schools, 97 percent were received; apparently, errors in the social security numbers used to identify the students of interest accounted for the remaining 3 percent. To assess possible response bias, T-tests were performed comparing the values on several major variables for students whose transcripts were received, versus those for students whose transcripts were not received. The variables examined included persistence rates (as determined from the students' responses in their Spring Surveys to a question about whether they had left the institutions), changes in students' self-ratings of their academic ability, and the extent of the students' participation in SSDS and SSDS-like services. No significant difference was found between the two groups on any of these measures, which indicates that response bias due to the loss of some transcripts was probably not a serious problem in the study's findings.

The Fall and Spring Student Surveys were mailed to 10,668 students. Of these, 6,593 (61.8 percent) of the Fall Surveys and 5,829 (54.6 percent) of the Spring Surveys were returned. While these response rates are relatively high for college students of generally low socio-economic status, whose responses were voluntary, the numbers of missing Surveys are sufficiently large to warrant some concern about possible response bias. To test for such bias, a number of analyses were performed. First, based on data from the Form for Listing SSDS Eligibles and Participants, students who did and those who did not return their Surveys were compared in terms of which of the five eligibility criteria they met, and their levels of need for SSDS services (as judged at the start of the year by the Project Directors). Very small but statistically significant differences were found on two of these six variables. Of students returning their Surveys, 51 percent were classified as economically deprived, while 48 percent of students not returning their Surveys were so classified. There were no significant differences on the other four criteria. The other difference was in level of need for services. (Need was scored on a scale from 1.0 to 3.0, with a rating of 1.0 indicating student need for a small amount of service, and 3.0 indicating the need for a large amount.) Students returning Surveys had a mean score of 2.17, while those not returning Surveys had a mean level of 2.22. This small difference is significant only because of the large degrees of freedom in student-level analyses. When the data were analyzed with projects as the unit of analysis, no significant differences were found between respondents and non-respondents on any of the variables considered.

Additional analyses were performed to determine whether the small but significant differences described above between respondents and non-respondents were likely to make any meaningful differences in the student-level findings reported in this study. For these analyses a set of student weights was calculated for each institution, such that the weighted data for students returning their Surveys would have the same distribution on eligibility criteria met, and on level of need for services, as the sample of students to whom Surveys were originally mailed.

In one set of comparisons, the mean values for all the outcome measures to be used in the impact analyses (e.g., persistence rates, grade point averages, course units completed, educational aspirations and expectations) were computed for each student, using both the raw values and the weighted values. T-tests did not show significant differences between the means of the weighted and the unweighted values for any of the outcome variables. As a further test, more than twenty of the analyses reported in Chapter 7 (e.g., cross-tabulations of student participation profiles by student ethnicity, student sex, and type of institution, and cross-tabulations of amounts of service received, by parental income level) and in Chapter 8 (impact analyses) were re-run using the student weights. None of these re-analyses differed in any significant interpretable fashion from the findings cited in this report. Our conclusion, therefore, is that the findings reported here on the basis of raw student data are representative of the results that would have been obtained if all students to whom Surveys were mailed had returned those forms.

CHAPTER 3. THE SSDS PROGRAM FROM THE FEDERAL PERSPECTIVE

All of the chapters that follow this one are based on information obtained from individual SSDS projects, from the institutions hosting the projects, and from students in those institutions. This information, while extremely relevant to the goals of the present study, is necessarily somewhat restricted in its perspective and tends to reflect local goals, priorities, and experiences. The present chapter is intended to provide a broader and more comprehensive view of the overall SSDS Program from the perspective of those administering the program at the Federal level. It should provide a useful interpretive framework for considering the more site-specific data reported in subsequent chapters. Information for this chapter was obtained through interviews conducted with a number of Education Department officials in the Office of Planning and Budget, the Office of Postsecondary Education, and branches of the Division of Student Services within the Office of Postsecondary Education.

This chapter is organized into two major sections corresponding to the two general types of information collected in the interviews. The first section synthesizes information gathered from program officials concerning SSDS program goals, accomplishments, and constraints. The second section describes several extremely important processes by which legislative and administrative mechanisms are activated to authorize program funding; to develop rules and regulations; to establish a specific appropriation; and to guide the disbursement of those funds. It also describes a final process by which the Office of Postsecondary Education and the Grant Procurement and Management Division monitor local projects.

A. Program Goals, Accomplishments, and Constraints

Student-Related Goals

All of the program officials interviewed agreed that the major goal of SSDS is to help disadvantaged students to persist in their postsecondary studies and to obtain degrees. There appeared to be differences among the respondents, however, in the extent to which they viewed this as the ultimate goal. One group of respondents indicated that successful completion of college is an end in itself, and an adequate justification for the SSDS Program; another perceived college as the first step, and graduate school as the ultimate goal; a third felt that SSDS will help to equalize educational opportunity and fulfillment; and still a fourth viewed the ultimate goals as improved class mobility for disadvantaged students, an increased earning and tax-paying capacity, less crime, and less public welfare. Nevertheless, these variations did not obscure the universal perception among respondents that SSDS should improve the experiences and success of disadvantaged students in their postsecondary-level education.

It was generally agreed by program officials interviewed that SSDS is designed to provide supplemental programs at institutions in order to help students remain in school. Such programs include remedial education, tutoring, professional and peer counseling, employment services, etc. These program officials feel that such services should help to build students' self-confidence and self-concept, and to assist them in maneuvering through a foreign environment in such a way as to ensure their academic and psychological survival. SSDS services are targeted to help students improve on both cognitive and affective levels, in order to assist them in reaching their maximum potential. It is thought by some program officials that the resources provided by SSDS are crucial not only in helping students to become competitive with other students, but also in assisting them to become independent of SSDS and other such special programs so that they can take advantage of the full range of academic offerings at institutions.

Institutional Goals

With respect to the intended effect of SSDS projects on their host institutions, there was general agreement that the broad goal is to increase institutional commitment to disadvantaged students, even though there is no specific language in the legislation with regard to this. Some respondents feel that techniques must be developed to train and educate the disadvantaged so they can compete with other students in the same institutions. There was also considerable feeling that institutions must change their policies so as to create a more supportive environment--an environment in which various supplemental programs can help disadvantaged students progress through the educational system. In order for institutions to maintain their enrollment, it is felt, they must change the negative way in which they perceive disadvantaged students. Curricula should be reexamined and modified so as to facilitate the integration of disadvantaged students into the regular curriculum. Institutions must equalize status between SSDS Programs and other existing learning or skills centers. SSDS personnel should enjoy the same status as other faculty members, and SSDS programs should maintain a central and visible location within the institution. Consistent with these perceptions of need for institutional commitment was the almost unanimous opinion among respondents that SSDS projects should become institutionalized after a given number of years. That is, they should become part of the institutional mainstream and should be financed by the institutions, rather than distinct appendages financed by the Federal government.

Program Accomplishments

Differences were found among program officials with regard to their level of knowledge of the SSDS Program's accomplishments; these differences seemed to reflect the extent to which they have contact with local projects. Most officials indicated that they had little firm empirical evidence for judging program success, but there was a strong and widespread belief that SSDS is successful in improving the retention and graduation rates of disadvantaged students pursuing a postsecondary education. Some officials feel that SSDS has made the difference between students' surviving and not surviving on college campuses. In part because of SSDS, it is felt, institutions are being forced to confront the need to educate a wider range of students, which in turn has created a new class of professionals to provide such an education. Some smaller institutions have received state funds to aid disadvantaged students, in addition to SSDS funds; this, according to some officials, may have resulted from the institutions' increased commitments to the disadvantaged, which may in turn have resulted from the SSDS experience.

Level of Need for SSDS Services

It was the unanimous opinion of respondents that the need for SSDS is extremely widespread, and extends far beyond the population now reached. One respondent cited a Survey of Income and Education that was conducted by the Department of Health, Education, and Welfare; based on this study, it was determined that, when one of the SSDS eligibility criteria changed from a 100 percent poverty level to a 150 percent poverty level,* the population eligible for SSDS more than doubled, going from 1.4 million to 2.9 million young people in the 18-24 year age range. Only 1 percent of this eligible population ever enrolls in college, and only 2.5 percent even attempts college enrollment. We can only surmise from these figures that there is a tremendous population unserved by college campuses. It seems safe to assume that there would be many more young people who, if it were possible, might choose to continue their education. These statistics strongly suggest an extremely broad-based need for the SSDS Program. At the time of this writing, only 600 schools across the country are funded from about 3600 institutions for higher education. Some respondents feel, based on the numbers of applications received from institutions, that there is a substantial need for additional Federal money for SSDS. They also believe that the applications from institutions reflect only a portion of the needy students--that there are many other such students who never enter the statistics, simply because the institutions do not submit applications, or because they understate the number of potentially eligible students. It is though by some program officials that the proportion of disadvantaged students had widened recently, as a result of worsened economic conditions and of decreased reading capabilities in the general population.

Program Constraints and Possible Solutions

There was total agreement that funding constraints are drastically limiting the SSDS Program's ability to respond to the vast need that is perceived among the nation's disadvantaged. In 1979, 729 applicants asked for $85 million, and only 75 percent (556 projects) were funded at a total of $55 million. In

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*The "150% poverty level" refers to individuals or families with total income of 150% (or half again) the officially defined poverty level.

1980, 790 applicants requested $115 million, while the amount to be awarded was only $60 million. This represents only a 9 percent funding increase over a period when inflation was closer to 14 percent. Not only has the number of funded projects not increased to meet the enormous need, but even the operational projects have seen their grant awards reduced to a minimum, with anything viewed as a luxury (trips, etc.) eliminated from their budgets to spread the money as far as it will go. The program officials interviewed pointed out that Federal regulations require full-service projects, yet many SSDS projects are not funded at an adequate level to ensure a complete range of services.

While the respondents were unanimous in viewing funding constraints as a major obstacle limiting the SSDS Program's ability to provide adequate services to all those in need, some uncertainty was expressed about how this problem might be solved. Some respondents feel that the answer is a massive increase in Federal funding for the program; they believe that the postsecondary institutions can never raise adequate funding on their own to meet the needs of disadvantaged youths, and that the Federal funding level for SSDS should be increased to two-to-four times its present level. Others feel that the Government's objective should not be to subsidize institutions by increasing the Federal support, but rather to provide "seed money" as leverage for schools to institutionalize local projects. There was general agreement, in fact, that institutionalization should be the final goal, but less unanimity about the institutions' readiness and financial ability to undertake this role. In any event, most of the respondents feel strongly that the SSDS Program's funding level should at least keep up with the rate of inflation, if it is to continue to fulfill its function.

B. Reauthorization, Regulations, Budgeting, Funding, and Monitoring

This section describes the following processes relevant to the SSDS program:

- Reauthorization: Production of law providing for continued existence of the program.
- Regulations: A process that defines the legislative and operational nature of the SSDS projects through guidelines.

- Budgeting: Establishment of a specific appropriation and a plan that describes how the appropriation will be spent.
- Funding: Selection of grantees and disbursement of funds.
- Monitoring: Assessment, by the Federal Government, of the programmatic and fiscal performance of SSDS local projects.

Each of these processes is described separately in this section. It should be noted, however, that the processes are highly interdependent, and to a great extent occur concurrently.

Reauthorization

This section describes the procedures applied during the last SSDS reauthorization, which culminated in the Higher Education Amendments of 1980. The reauthorization process was characterized by a centralized management style, coordinated by the Office of the Secretary of Education. A Project Manager from the Office of the Assistant Secretary for Planning and Evaluation was given the responsibility for ensuring that all work was completed in a timely manner. This included organizing procedures for preparing three types of products for approximately 33 programs: issue papers, option papers, and decision memoranda. To facilitate this work, the Project Manager created a task force composed of the Education Deputies. A tertiary organization of work groups, organized by the task force, was assigned the responsibility of identifying and addressing major issues in specific areas of higher education. Work groups were formed either to address specific titles of the law (e.g., Trio Program), or to address a major issue area (e.g., student loans). Each work group consisted of Education Division staff whose expertise covered policy analysis, evaluation, legislation, and programming. Both the task force and the work groups consulted with outside groups and held regular informal discussions with Congressional staff.

An example of a key issue considered in the last appropriation planning was how economic deprivation (as an eligibility criterion for students) should be defined. SSDS originally used the Orshansky 100% Poverty Index; that is, a student was considered to meet the economic eligibility criterion if that student or his/her family had a total income not exceeding the poverty level designated by the Orshansky formula. The Program Development Branch of the Division of Student Services prepared an issue paper discussing the possibility of changing the economic criterion to an Orshansky 150% level, i.e., one and a half times the poverty level designated by the Orshansky formula; the paper also discussed the potential effects of this change on the numbers of students who would be eligible. The issue paper was reviewed and revised by the Deputy Assistant Secretary for Higher Education Incentives Program, and the suggested change in the eligibility criteria was ultimately incorporated into the Higher Education Amendments of 1980.

Through such processes the work groups and the task force produced option papers on major issues, issue papers on legislative or administrative policy changes associated with budget decisions, and final decision memoranda on reauthorization proposals. The timeline for submission of these documents varied according to the need for early Secretarial guidance and the relationship to budget decisions. After Secretarial review, recommendations were submitted to the Office of Management and Budget and to the White House staff; a final decision memorandum was then submitted to the President, followed by a Presidential message submitting legislation to Congress for approval.

Information hearings on the proposed legislation were held separately by the House and Senate Subcommittees and testimony was solicited from interest groups and the public. Bills for reauthorization were then submitted by Senators and Representatives, and were subsequently assigned to Committees and Subcommittees. Testimony was received from the Secretary of the Education Department, the Assistant Secretary of Postsecondary Education, the Deputy Assistant Secretary for Higher Education Incentives Program, the Division of Student Services, and the Assistance Secretary for Planning and Budget. In addition, testimony was heard from interest groups and the public. The bills were marked up and sent from subcommittee to committee to the floor with revisions. The final version of the bill, agreed on by both houses of Congress, was then sent to the President for his signature.

Regulations

Regulations must be developed within 240 days of the effective date of the reauthorizing legislation. The process begins when predominate Bills are available in the House and Senate. The Education Department submits a schedule to regulate within the first 60 days. Regulations must then be produced within the following 180 days.

The Program Development Branch of the Division of Student Services develops an issue paper based on the House and Senate bills and on the old regulations. One issue during the most recent development of regulations was whether or not there could be SSDS projects to serve only limited-English-speaking students. Another issue was whether or not SSDS projects could duplicate services already provided elsewhere on the college campus. Following review and revision of an issue paper by the Deputy Assistant for Higher Education Incentives Program, it is submitted to a Regulations Unit set up by the Assistant Secretary for Postsecondary Education. The Regulations Unit defines and clarifies terms and produces a draft based on the issue paper, the bills, and other documents such as the Education Division General Administrative Regulations.

The draft produced by the Regulations Unit is submitted to the Assistant Secretary for Postsecondary Education for review, circulated to the Assistant Secretary for Planning and Budget, the General Counsel, and the Assistant Secretary for Legislation for review, and then returned to the Deputy Assistant Secretary for Higher Education Incentives Program.

Next, the paper is sent to a select group of citizens (usually interest groups and others involved in higher education) for additional comments. Based on these comments, the Program Development Branch revises the draft regulations and submits the revised draft to the Assistant Secretary for Planning and Budget, the General Counsel, and the Assistant Secretary for Legislation for review.

A Notice of Intent to Make Rules is published in the Federal Register, after which approximately 10 to 12 hearings are held across the country to elicit public comments on the proposed rules and regulations. The transcripts from these hearings are used by the Program Development Branch of the Division of Student Services to develop a draft of responses to all comments made at the public hearings. The draft of rules and regulations, along with the comments and responses, are reviewed by the Deputy Assistant for Higher Education Incentives Program, the Deputy Assistant Secretary for Postsecondary Education, the Assistant Secretary for Planning and Budget, and the Assistant Secretary for Legislation.

The final regulations along with comments and responses are published in the Federal Register. After this publication there is a 45-day period during which Congress may act to rescind the regulations. If Congress takes no action the regulations become final.

Budgeting

The Program Development Branch of the Division of Student Services prepares an issue paper in response to a request from the Assistant Secretary for Planning and Budget. This paper generally addresses issues concerning the Zero Base Budget. Typical issues might include how many new awards should be made, whether to adjust for inflation, and how much more money, if any, should be provided to expand the program above and beyond the budgetary provision for inflation. The issue paper is reviewed and revised by the Deputy Assistant Secretary for Higher Education Incentives Program and subsequently by the Assistant Secretary for Postsecondary Education. The issue paper is then submitted to the Assistant Secretary for Planning and Budget, who compiles issues on many programs and holds a Secretarial Retreat on these issues. This Retreat, attended by the Secretary and all key Assistant Secretaries in the Education Department, produces a Zero Based Budget (ZBB), including overall rationale, and Secretarial and Assistant Secretarial consensus on minimum and maximum budget levels. ZBB levels usually include minimum, status quo, and improved categories.

The Assistant Secretary for Postsecondary Education relays the budget information gathered at the Secretarial Retreat to the Division of Student Services for production of a draft Zero Based Budget package detailing budget levels and rationales. The Zero Based Budget Package is reviewed and revised by the

Deputy Assistant Secretary for Higher Education Incentives Program and then by the Assistant Secretary for Postsecondary Education. It is then sent to the Assistant Secretary for Planning and Budget who constructs a consolidated Zero Based Budget for all education programs. This consolidated Zero Based Budget is reviewed and revised by the Secretary of the Education Department who then submits it to the Office of Management and Budget as a Preliminary Budget Request.

The Office of Management and Budget holds hearings with testimony given by the Secretary of the Education Department, the Assistant Secretary for Planning and Budget, the Assistant Secretary for Postsecondary Education, the Deputy Assistant Secretary for Higher Education Incentives Program, and the Division of Student Services. The Office of Management and Budget and the Education Department negotiate and revise the Zero Based Budget package to determine the proposed funding levels. This budget is submitted by the Office of Management and Budget (representing the President) to the Senate Subcommittee on Appropriations/Committee on Labor, Education and Human Resources, and to the Corresponding House Subcommittee/Committee.

Hearings are held separately by the House and the Senate with testimony in support of the President's budget from the Secretary of the Education Department, the Assistant Secretary for Planning and Budget, the Assistant Secretary for Postsecondary Education, the Deputy Assistant Secretary for Higher Education Incentives Program, and the Division of Student Services. Testimony is also heard either in support of or in opposition to the President's proposed budget from interest groups and the public.

The House and Senate Appropriation Bills are marked up and flow from the subcommittee to committee to the floor of each legislative body for a vote. Frequently the House and Senate versions are quite different and a Conference Committee produces a revised bill, which goes to both legislative bodies for approval. The bill becomes law (or an appropriation) when signed by the President.

As the appropriation levels and language often differ from the President's proposals, the Assistant Secretary for Postsecondary Education develops a Budget Execution Plan which describes how the appropriation will be spent, and designates accounts and purposes. This Budget Execution Plan is submitted to the Assistant Secretary for Planning and Budget and then to the Secretary of the Education Department for review. Subsequent to Secretarial review the Execution Plan is sent to the Office of Management and Budget for approval.

One final note should be added, regarding the overlapping nature of the budget process for successive fiscal years. Three budgets are usually overlapping: In year K, the Fiscal Year K-1 budget is being spent, the Fiscal Year K budget is being defended, and the Fiscal Year K+1 budget is being planned or developed.

Funding of Local Projects

The Division of Student Services develops a funding schedule that includes due dates for products and responsibilities. This schedule is submitted to the Deputy Assistant Secretary for Higher Education Incentives Program and to the Assitant Secretary for Postsecondary Education for clearance.

The Program Development Branch of the Division of Student Services develops an application package that includes performance and fiscal forms. Following review by the Deputy Assistant for Higher Education Incentives Program and by the Assistant Secretary for Postsecondary Education, the application package is submitted for approval to the Assistant Secretary for Legislation, the General Counsel, and the Assistant Secretary for Management. The Assistant Secretary for Management submits the approved application package, along with a justification package developed by the Division of Student Services, to the Federal Education Data Acquisition Council (FEDAC) for final clearance.

A Closing-Date Notice written by the Division of Student Services is published in the Federal Register. This notice is designed to alert people that there will be money available for a particular program. It specifies the closing date, the address for submission of applications, and a list of priorities.

The Division of Student Services develops an Application Evaluation Funding Plan which includes application-handling procedures that range from the receipt of applications to their funding. The plan is submitted for clearance to the Assistant Secretary for Postsecondary Education, then through the Assistant Secretary of Management to the Grant Procurement and Management Division.

Application packages are mailed to institutions, which must submit their applications prior to the closing date. Institutions can also request applications from the Information Services Branch of the Division of Student Services. Two weeks after the publication of the Closing Date Notice, the Program Development Branch of the Division of Student Services holds from 7 to 20 two-day application workshops around the country.

The required qualifications for field readers of the applications are determined by the Deputy Assistant Secretary for Higher Education Incentives Program. The Division of Student Services selects a pool of about 400 field readers and submits it to the Deputy Assistant Secretary for Higher Education Incentives Program for approval. Instruction packets mailed to the field readers include Rules and Regulations, funding criteria, Education Division General Administrative Regulations, technical review forms, conflict of interest statements, a sample proposal, suggested application guides, and contract information (readers are hired under contract). Incoming applications are logged into the computer at the Application Control Center.

Panels of three field readers individually read, review, and score approximately 15 proposals a week for two to three weeks. The panels of three field readers discuss and iron out their differences. After group collaboration the field readers recomment and rescore individually. Reviews prepared by the field readers are critiqued by the Program Development Branch of the Division of Student Services for completion, accuracy, consistency with rules and regulations, etc. These reviews are sent first to the Information Services Branch of the Division of Student Services to be logged into a computer for composite scores and rank ordering, and then forwarded to the Project Services Branch of the Division of Student Services.

The Project Services Branch reviews the top-ranked applications to determine if they meet the requirements of the regulations. Section 3-2 of the Grant Procurement and Management Division Funding Manual specifies the overall application review procedures. The Application Evaluation Funding Plan establishes the extent to which deviations from procedures are acceptable and also contains a review form that helps reviewers assess the scope of the projects and provides other useful evaluation guidelines. The Project Services Branch uses this plan, the Education Division General Administrative Regulations, and the Rules and Regulations, to decide if the rank order determined by the Information Services Bureau should be maintained. Ten percent more applications than are to be funded are reviewed at this time. For each fundable application, a set of items to be negotiated is developed as well as a negotiable budget.

The recommendations and proposed budget form a slate of fundable projects that is submitted to the Division of Student Services for approval. The slate is then submitted for approval first to the Deputy Assistant for Higher Education Incentives Program, and then to the Assistant Secretary for Postsecondary Education. After approval, the slate is sent to the Grant Procurement and Management Division, then to the Congressional Liaison Office, and finally to the House and the Senate.

There is a 48-hour review period for Congress, during which Congressmen publicly announce awards of funds in their states. After this review period, the Grant Procurement and Management Division negotiates grants with the applicants. This negotiation determines the size of the project, its duration, and its funding level. A Grant Award Document is produced from this process.

All SSDS funds, like those of the other Trio programs, flow through the National Institute of Health. Grantees draw upon their account and file quarterly expense statements.

Monitoring of Local Projects

Federal monitoring of local projects is an ongoing ad hoc process rather than a distinct sequence of events such as those described above for reauthorization, regulations, budgeting, and funding. Projects are monitored in terms of their full range of programmatic and fiscal activities. The revised project application and the grant award document are the best sources of information about what a given project is intended to accomplish. Thus, these documents are crucial in all monitoring activities and provide the benchmark for gauging a project's performance. Other prime sources for monitoring include projects' annual progress reports, their fiscal reports, and technical questions received from the projects.

The major monitoring tool utilized by the Project Services Branch of the Division of Student Services is the local site visit. Most site visits are conducted in response to suspected problems within the project, but some are generated by a random selection procedure. A Site Visit Report is drafted based on face-to-face discussions conducted by the Project Services Branch Project Officer with the grantee (institutional representatives, project staff and clients), and on a review of project records. A copy of this report is sent to an institutional representative with a request for a response within 30 days. If no problems were identified, a "Closing-Out Site Visit" letter is sent to the institution. Technical assistance is provided to help solve problems, and a 60-day follow-up visit may be conducted. If problems are not ameliorated, the Division of Student Services may alert the Grant Procurement and Management Division. The GPMD, with the Division of Student Services in an advisory role, may choose to terminate project funding.

The Education Department also conducts audits of projects, through the Education Department Regional Offices. Candidates for audit are suggested by the Division of Student Services (through the Deputy Assistant Secretary for the Assistant Secretary of Postsecondary Education). The field auditors examine all fiscal and programmatic aspects of the grant, using the revised project application and grant award document as the benchmark for performance. Audit exceptions are resolved within the Education Department, frequently with the Division of Student Services in an advisory role. When an institution is selected, all Federal grants are usually audited. Hence, many TRIO audits stem from audits of campus-based student financial aid grants. (Some audits have been generated when the primary focus was a Department of Interior grant at the Institution.)

Three other units also monitor programmatic performance. The Inspector General of the Education Department investigates project and program activities with respect to fraud, waste, and abuse. The General Accounting Office monitors program activities, most frequently at the request of Congress. Finally, the Office of Management of the Education Department conducts management and impact evaluations of programs. These activities include quality control, service delivery assessments, and national impact evaluation.

CHAPTER 4. PROJECT CONTEXT, HISTORY, RESOURCES, AND ADMINISTRATIVE PROCEDURES

This chapter contains most of the descriptive data collected on the SSDS projects and their participating students. It lacks only the detailed records of services provided to students (i.e., data from the Student Participation Records) and the data on project-institution relationships, which are covered in Chapters 7 and 6, respectively. The present chapter first summarizes a few facts about the institutional context in which the projects operate, presents a brief overview of the projects' recent history, and then describes the Project Directors' perceptions of their project goals. Relevant characteristics of the Project Directors, their staffs, and the participating students are next discussed, followed by descriptive data on the projects' resources, policies, and procedures. The chapter concludes with information about the Project Directors' perception of staff effort devoted to different student needs, and of the staffs' success in meeting those needs.

A. Context of Project Operations: Characteristics of Host Institution

In general, institutions hosting mature SSDS projects in 1979-80 represented a wide spectrum of postsecondary schools across the country. As noted in Chapter 2, no vocational-technical schools or agencies were included in this study. Of the remaining institutions from which samples were drawn for the evaluation, about 4 percent were private 2-year colleges, 33 percent were public 2-year colleges, 20 percent private 4-year colleges or universities, and 43 percent public 4-year colleges or universities.

Figures 4-1a through 4-1c below, show the distributions of White, Black, and Hispanic students enrolled in the host institutions. As indicated in Figure 4-1a, better than two-thirds of the institutions represented in this study had over 50 percent White enrollments; in 30 percent of the institutions, Whites accounted for at least nine-tenths of the total enrollments. Black students contributed somewhat less heavily to the enrollments, although 30 percent of the institutions had over 50 percent Black enrollments (Figure 4-1b). As is true of postsecondary institutions in general, Hispanics constituted a fairly

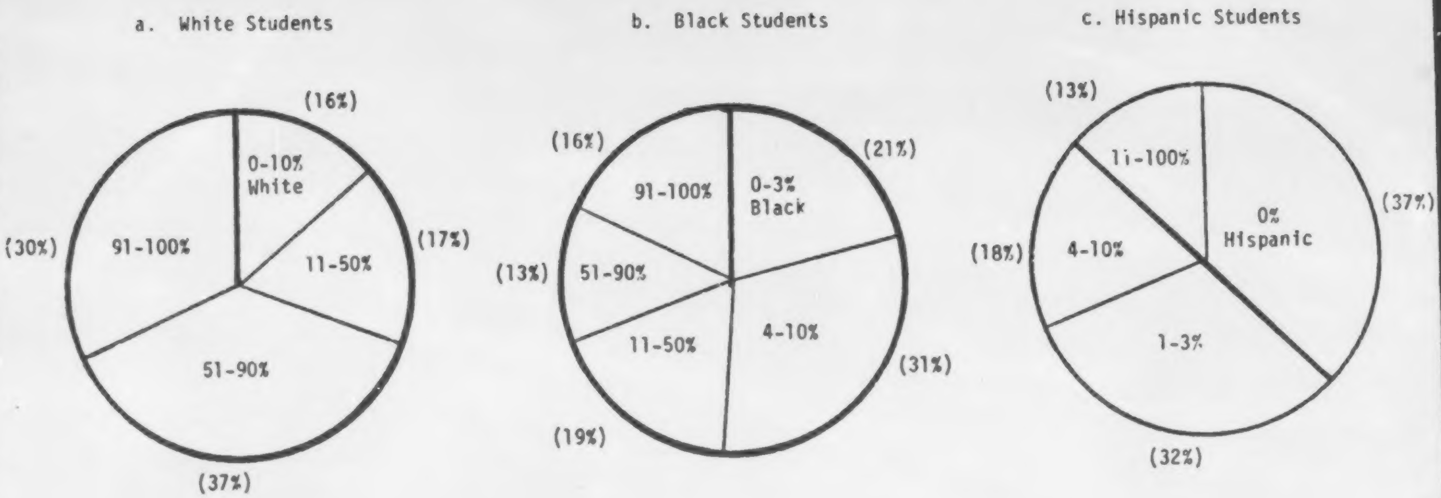

Figure 4-1. Percentages of Host Institutions Having Different Percentages of Black, White, and Hispanic Students

small percentage of total enrollment in the host institutions (Figure 4-1c); only 13 percent of those institutions had over 10 percent Hispanics and over a third reported no Hispanic students. Not unexpectedly, public 4-year colleges and universities had the smallest percentages of minority students (see Appendix 4-1).

Minority group members constituted roughly the same overall percentages of faculty as they did of students in the host institutions (see Appendix 4-2). The percentages of minority faculty were highest for 2-year colleges (two-thirds had over 10 percent minority faculty) and lowest for public 4-year colleges and universities (only one-third had over 10 percent minority faculty) (see Appendix 4-3).

Two-year colleges had substantially higher percentages of part-time students than 4-year colleges and universities. Over half of the 2-year colleges had more than 50 percent part-time students, while well under a tenth of the 4-year colleges and universities had such large percentages of part-time students (see Appendix 4-4).

Since improved student persistence is one of the important goals of SSDS, the host institutions' overall persistence rates may be of some interest. The only available data on institutional persistence rates pertained to the percentages of entering freshmen students who were enrolled in those same institutions at the start of the sophomore year. By far the highest persistence was reported by private 4-year colleges and universities, which had an average persistence rate of around 75 percent. The average persistence rate for public 4-year institutions was 61 percent, and that for 2-year colleges was 55 percent (see Appendix 4-5). It is possible, of course, that these variations in persistence reflect other factors that may be confounded with institutional offering and control, such as the racial/ethnic composition of the student body.

B. Project History

As indicated below in Figure 4-2, about a third of the projects represented by this study are relatively old, having been operational for at least seven years in 1979-80. In interpreting this finding, however, it should be kept in mind that the study sample, as noted in Chapter 2, was limited to "mature" projects, and by our definition of that term any projects not funded for at least two years prior to 1979-80 were automatically excluded from the study. Projects' age distributions differed somewhat among different types of institutions, but no type had consistently older or younger projects than any other type (see Appendix 4-6).

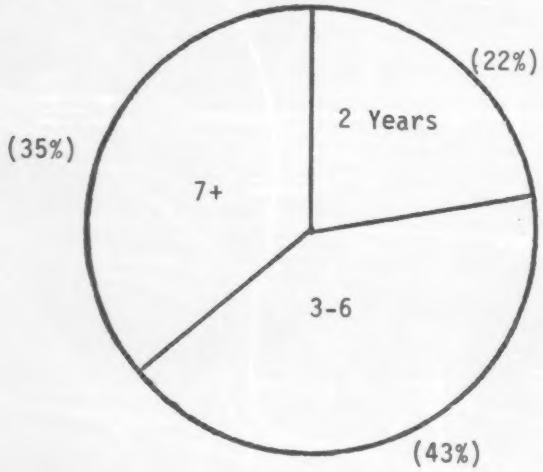

Figure 4-2. Distribution on Numbers of Years Projects Had Been Operational

Most projects had grown appreciably over the three years starting in 1977-78, in terms of their numbers of staff members, numbers of participating students, and funding levels. These growth patterns are summarized below in Figures 4-3, 4-4, and 4-5. It should be noted in connection with Figure 4-4 that "staff" as defined here includes peer tutors, and increased use of tutors on the part of many projects may explain the fairly large increase in staff size (e.g., 51 percent or more increase in almost two-thirds of the projects).

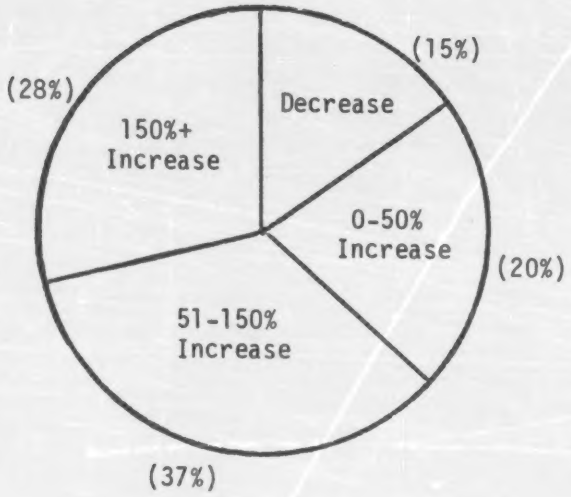

Figure 4-3. Percentages of Projects Reporting Changes in Staff Size

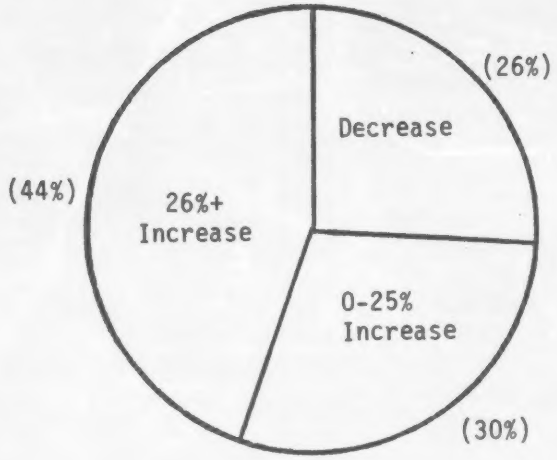

Figure 4-4. Percentages of Projects Reporting Changes in Numbers of Clients Over Three-Year Period

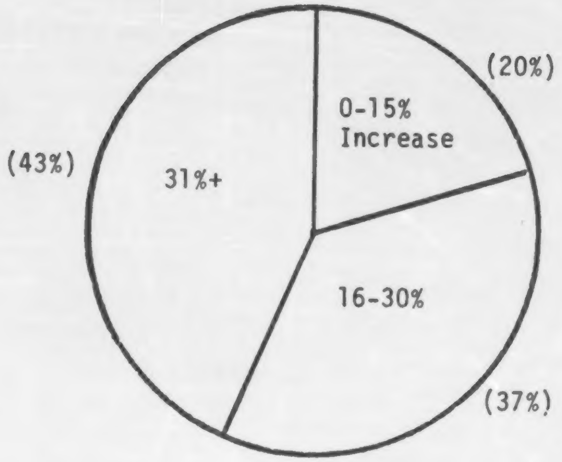

Figure 4-5. Percentages of Projects Reporting Changes in Funding Level Over Three-Year Period

The average annual staff turnover (over a three-year period) of the projects was moderately high, as shown in Figure 4-6. Over a fourth of the projects, for example, experienced more than a 25 percent turnover rate. Projects in 4-year public schools had a lower turnover rate overall than those in other types of host institutions (see Appendix 4-7).

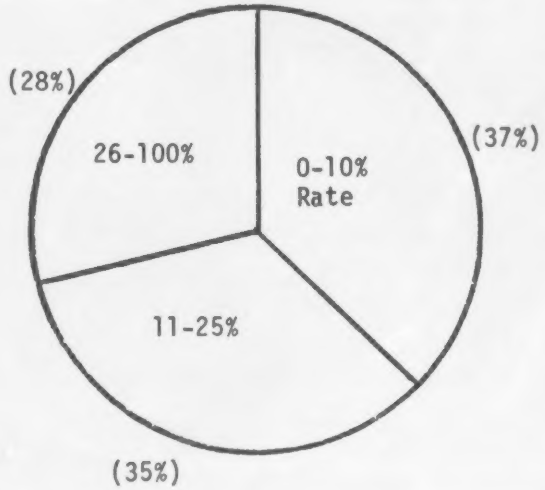

Figure 4-6. Percentages of Projects Reporting Different Levels of Staff Turnover Rate

C. Project Directors' Perceptions of Project Goals

Project Directors were asked to indicate the four goals, out of a list of twelve, that they considered most relevant and important to their projects. Figure 4-7 shows the percentages of Project Directors placing each of the twelve goals in the top four positions of importance.

Attempts to cluster the twelve goals into a smaller number of general areas of emphasis were not successful, as the clusters did not show strong relationships to other project characteristics. However, Figure 4-7 indicates that large percentages of Project Directors gave high priority to goals A and F, both of which appear to reflect an emphasis on strengthening students' academic skills. Also selected by substantial numbers of Project Directors was goal E, which is a student-oriented objective, and goals G and J, which are more process goals than outcome goals. Evidently few projects place any major emphasis on preparing students for advanced studies (goal D) or for the labor market (goal C); this would suggest strong project focus on what happens to the students while they are undergraduates in college, and much less emphasis on longer-range goals.

D. Project Director Characteristics

Project Directors were asked how many years of prior relevant experience they had, where "relevant" experience was defined as "number of years of work experience...in a position or positions requiring the provision of services or activities similar to those [the Project Director] provides in the Project." As indicated in Figure 4-8, most Project Director were quite experienced, with around two-thirds overall having more than five years' relevant experience.* (The number in parentheses in each bar is the percentage of Project Directors for that type of institution claiming the years of relevant experience designated immediately above.) Among private 4-year colleges and universities, over three-fourths of the Project Directors claimed this level of experience.

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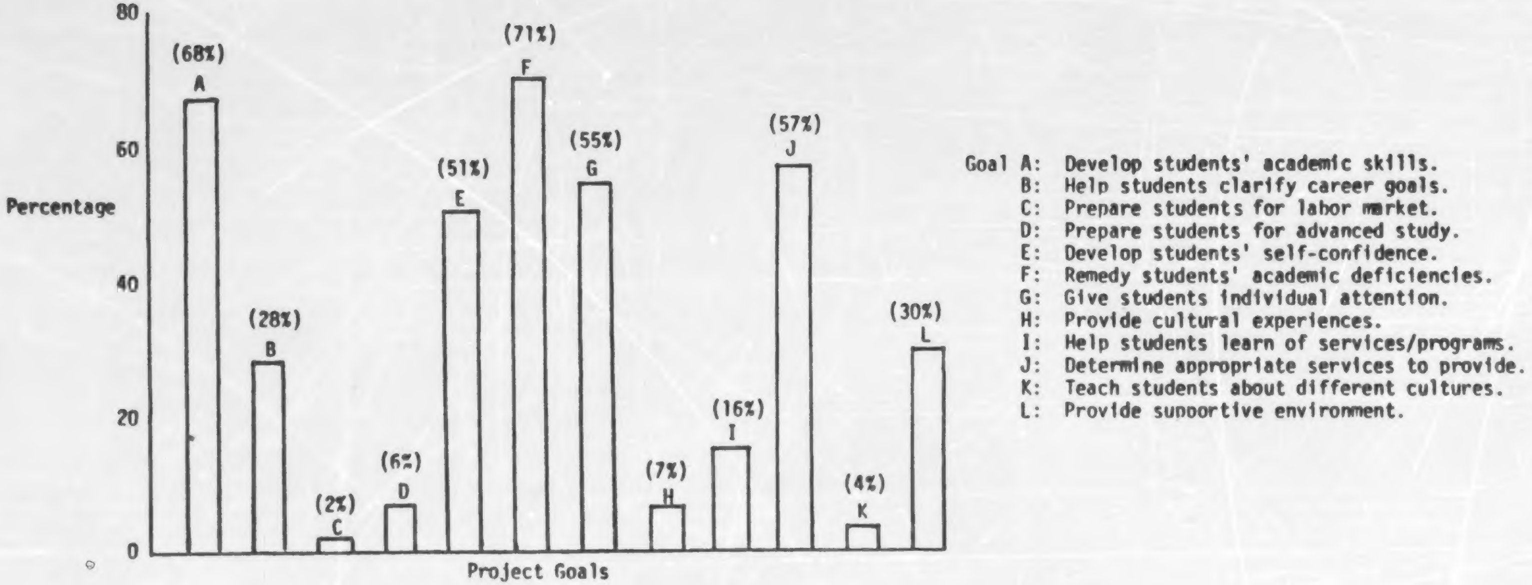
*Again, this information should be interpreted in the light of the study sample's exclusion of projects less than three years old.



Goal A: Develop students' academic skills.
B: Help students clarify career goals.
C: Prepare students for labor market.
D: Prepare students for advanced study.
E: Develop students' self-confidence.
F: Remedy students' academic deficiencies.
G: Give students individual attention.
H: Provide cultural experiences.
I: Help students learn of services/programs.
J: Determine appropriate services to provide.
K: Teach students about different cultures.
L: Provide supportive environment.

Figure 4-7. Percentages of Project Directors Assigning Top Four Positions to Different Potential Project Goals

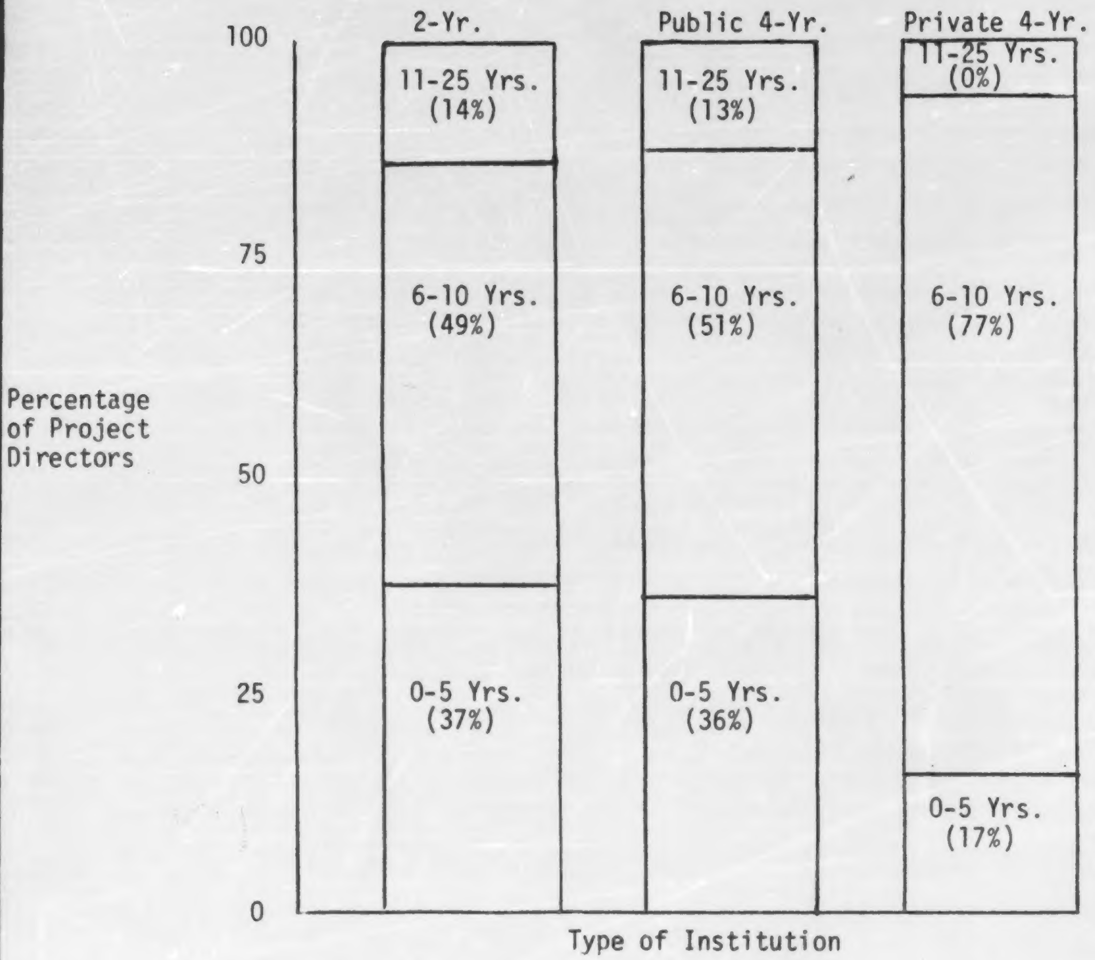


Figure 4-8. Percentages of Project Directors Having Different Lengths of Relevant Experience, by Type of Institution

Project Directors were also asked what percentage of their total work time was spent on "other institutional and institution-related responsibilities." Examples of such activities, cited in the question to the Project Directors, were "serving on the institution's admissions committee, teaching a departmentally sponsored, open enrollment course, or serving as an advisor to a special studies program." It should be noted that most of the activities listed as examples, though outside the direct project responsibilities, are nevertheless closely related to the functions served by the SSDS program, and might be considered to serve the interests of the projects. Figure 4-9 shows that, at least for 4-year colleges and universities, outside demand for Project Director time is greater in private institutions (where 98 percent of the Project Directors spend over 10 percent of their time on "outside" activities) than in public institutions (where around three-fourths of the Project Directors spend that much time outside direct project activities). The level of outside demand for Project Director time in 2-year colleges is generally similar to that in the public 4-year institutions.

The overall percentages of male and female Project Directors were almost identical. As Figure 4-10 shows, however, Project Directors in public 4-year colleges and universities were predominantly male (72 percent to 28 percent female), whereas the majorities of Project Directors in private 4-year institutions and in 2-year colleges were female. In general, and across the different types of institutions, the probability of a project's having a female Project Director increased as the percentage of female faculty in the host institution increased (see Appendix 4-8), and also as the percentage of female staff members in the project went up (see Appendix 4-9).

One possible explanation for the low percentage of female Project Directors in public 4-year colleges and universities is that such institutions usually have relatively low staff turnover rates. This tends to make it a slower process for females (or any other traditionally underrepresented group) to replace incumbents and thereby move up the academic or administrative ladder.

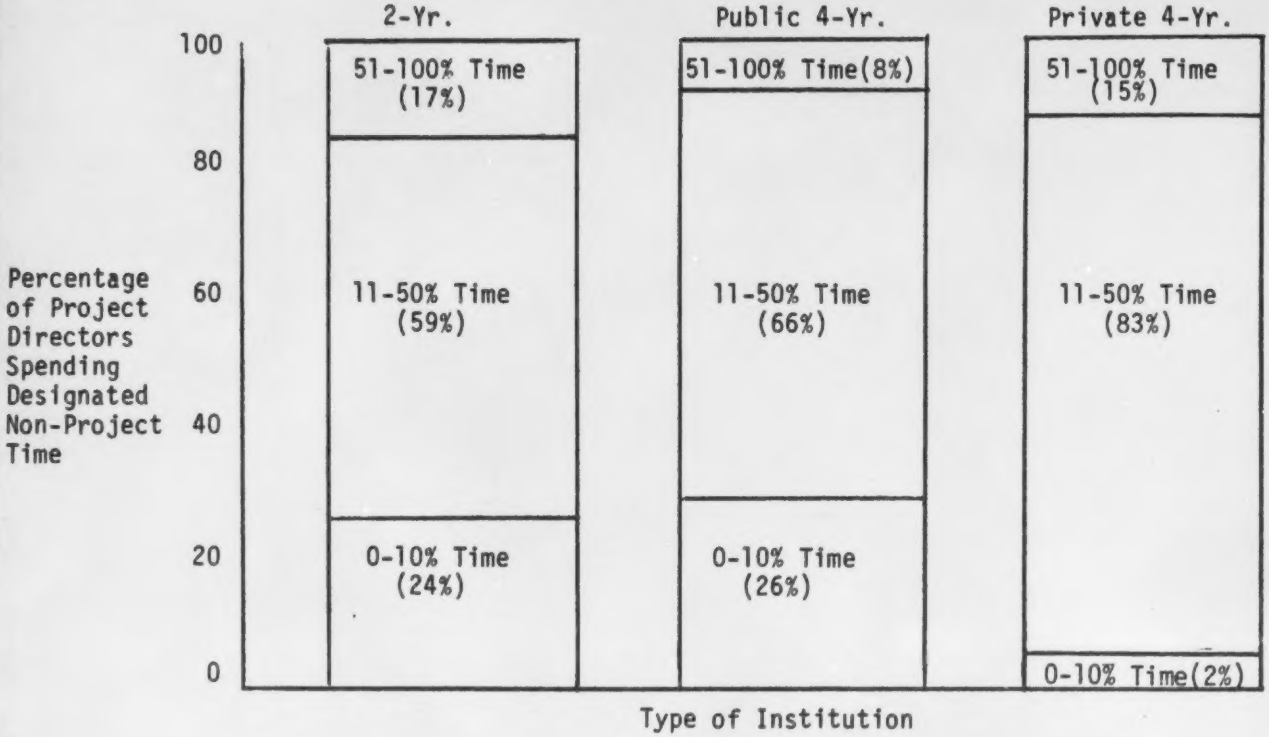


Figure 4-9. Percentages of Project Directors in Different Types of Institutions Spending Different Percentages of Non-Project Time

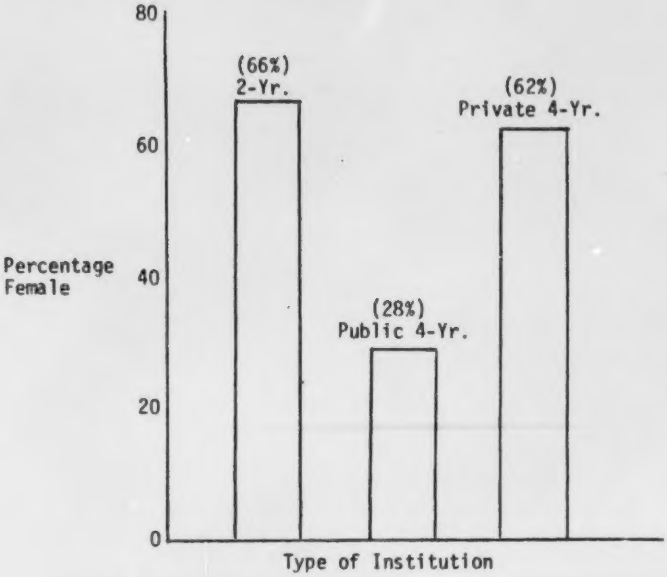


Figure 4-10. Percentages of Female Project Directors, by Type of Institution

The racial/ethnic distribution of the Project Directors is indicated in Figure 4-11. Blacks constituted the largest group in this distribution (almost 55 percent), and Whites the second largest group (32 percent). There were no oriental Project Directors in the mature projects represented by this study. Across all types of institutions, the likelihood of a Project Director's being a minority group member was related to the racial/ethnic composition of faculty in the institution (see Appendix 4-10). Half of the Project Directors in institutions having fewer than 50 percent minority faculty were themselves minority. As the percentage of minority faculty increased, the probability of the project's having a minority Project Director also increased.

E. Project Staff Characteristics

On the average, each project had slightly more than 35 staff members. (See Appendix 4-11) The largest staffs were in public 4-year colleges and universities, with an average of almost 47 staff members; the corresponding numbers for 2-year colleges, and private 4-year colleges and universities, were 29 and 23 respectively. It should be noted, however, that, overall, almost 76 percent of

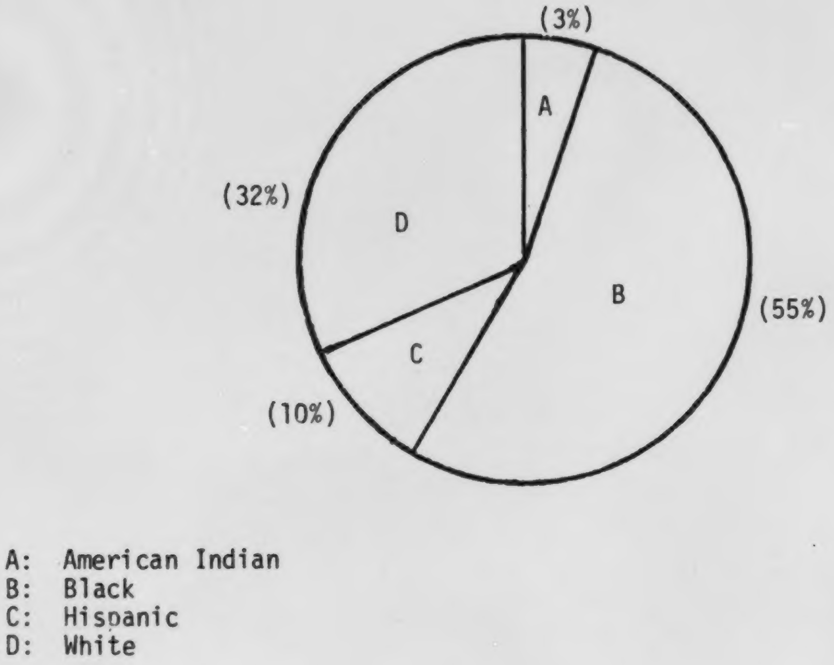


Figure 4-11. Distribution of Different Racial/Ethnic Groups Among Project Directors

these staff members worked less than half-time for the projects, 10 percent worked half-time, and only 14 percent worked full-time (see Appendix 4-12). Percentages of staff members working different portions of time did not vary in any systematic way with project size (number of clients), although the very largest projects, with over 500 clients, had the smallest percentage of full-time staff members (9 percent).

The large number of less-than-half-time staff members results primarily from the extensive use in many projects of students as peer tutors, and occasionally as peer counselors. Overall, 75 percent of the project staff members were students--a figure almost identical to the percentage of less-than-half time members (see Appendix 4-12). Although there was no systematic rise or fall in percentage of student staff members with increasing project size, the projects with over 500 clients had the largest such percentage (83 percent).

Among staff members who were committed half-time or more to the project, the experience level was generally fairly high, as shown in Figure 4-12. Overall, better than three-fourths of the staff members (including Project Directors) had at least two years' prior experience in providing similar services, and about 42 percent had four or more years' experience. The most experienced staffs were in private 4-year colleges and universities, and the least experienced in 2-year colleges.

Again considering only staff members employed half-time or more by the projects, there was considerable variation in the educational levels, with over a fourth overall having a graduate (post-baccalaureate) degree, but with almost another fourth of the staff members having only a high school degree. As Figure 4-13 indicates, the most highly educated staffs were in private 4-year colleges and universities. The associate degree was more common in 2-year colleges than in other types of institutions, probably reflecting the 2-year colleges' recruitment of some of their own graduates for staff positions.

On the average, about 60 percent of the staff members were female (see Appendix 4-13). Across types of institutions, 31 percent of the staff members were Black, 54 percent White, 7 percent Hispanic, and 8 percent of other racial/ ethnic groups.

When asked about areas of possible improvement in their project staff members, almost all of the Project Directors indicated they were satisfied with the staffs' present level of morale, commitment to the project, work style, training, and experience (see Appendix 4-14).

F. Characteristics of Participating Students (Project Clients)

According to the Student Participation Records collected in this study, the overall average number of participating students across all projects was 414; however, the number differs greatly across types of institutions, with an average client number of 524 for 2-year colleges, 438 for public 4-year colleges and universities, and only 159 for private 4-year colleges and universities (see Appendix 4-15).

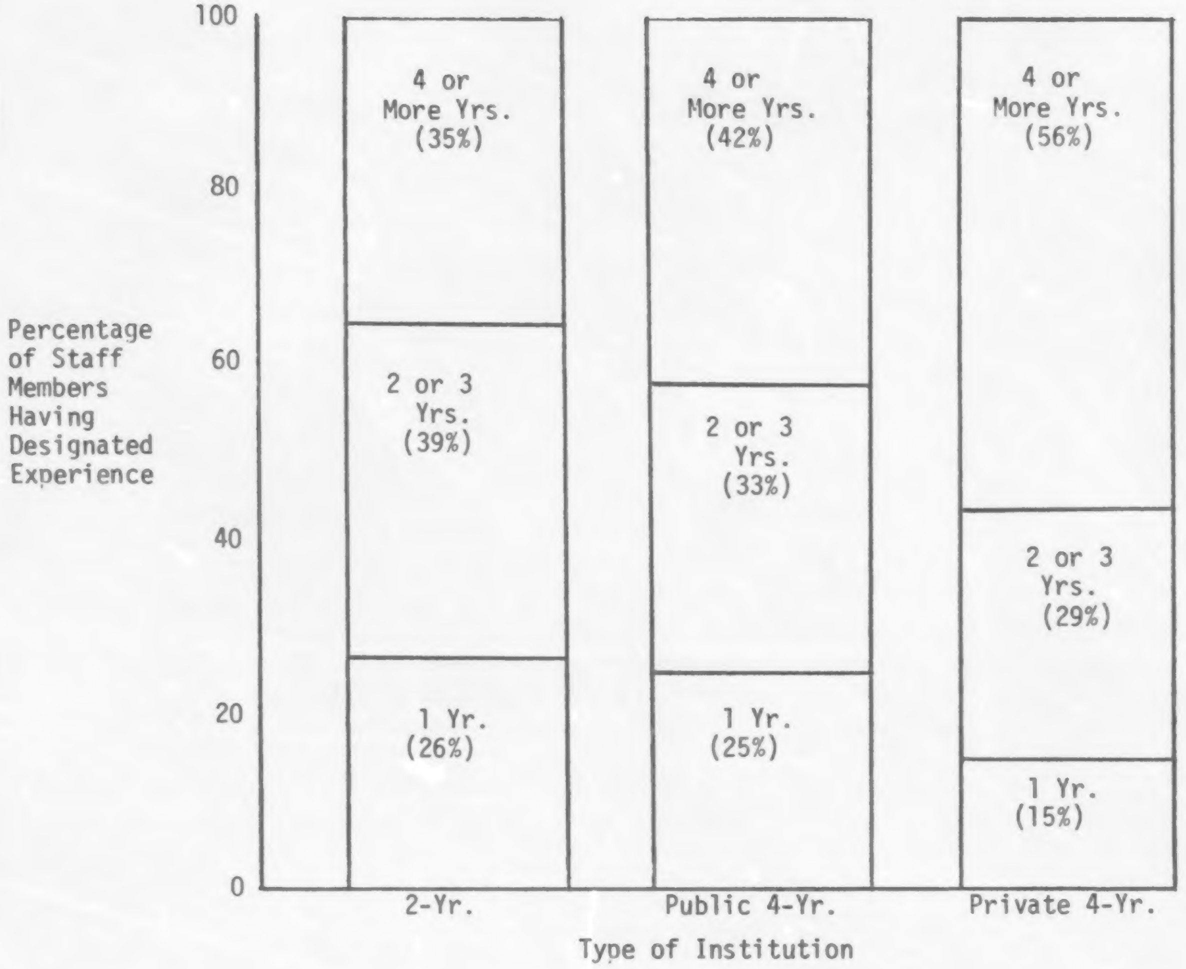


Figure 4-12. Percentages of Project Staff Members* Having Different Levels of Relevant Experience,** by Type of Institution

* Only staff members working half-time or more on project activities are included in these percentages.

** Relevant experience is defined as experience in providing services similar to those the individual provides in SSDS.

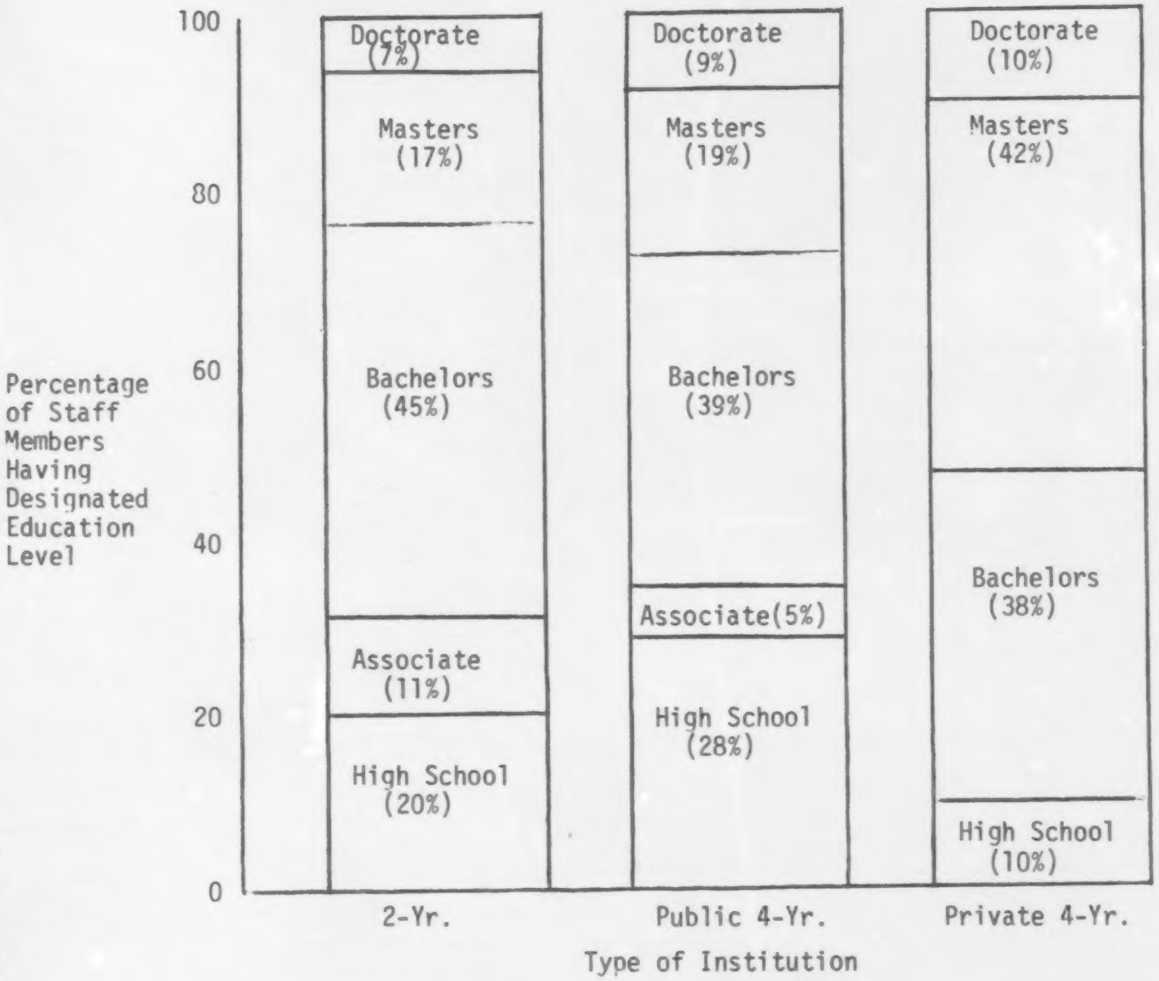


Figure 4-13. Percentages of Project Staff Members* Having Different Education Levels by Type of Institution

* Only staff members employed half-time or more on project activities included in these percentages.

The only source of additional data on all participating students was the Special Services Final Performance Report prepared for the Education Department each year, and the most recent year for which such a report has been prepared is 1978-79, or one year prior to the academic year in which the present study was performed. Based on that year's final report, around 49 percent of clients in the mature projects represented by this study were Black, 29 percent White, 17 percent Hispanic, and 5 percent of other racial/ethnic groups (see Appendix 4-16). These figures compare with institutional study body figures for 1979-80 of 20 percent Black, 71 percent White, 6 percent Hispanic, and 2 percent students of other racial/ethnic groups. The final report further indicates that 60 percent of the project clients were female.

Also indicated in the final report are the percentages of participating students meeting various possible eligibility criteria (a given student could satisfy more than one such criterion). By far the most common eligibility criterion indicated for the clients was that of low family income (roughly half the clients overall met this criterion); the second most common criterion was educational need, which was indicated for approximately a third of the participating students. Rarely indicated criteria included cultural need, physical disability, and limited English-speaking ability, all of which reportedly applied to fewer than 9 percent of the clients overall (see Appendix 4-17).

G. Project Resources and Allocations

Project budgets varied greatly, with the smallest running around $25,000 and the largest around $425,000. Many projects received funding from multiple sources. All of the projects (by definition of the sample) received Federal funds, at an average level of $106,106. (See Appendix 4-18.) About 30 percent received state funds and 28 percent received funds from other sources such as local contributions; the average dollar amounts, among the projects receiving such contributions, were $56,303 and $32,894 for state and "other" funds, respectively.

Figure 4-14 shows how the relative contributions of Federal, state, and other funds related to the size of the total budget. The baseline axis of the figure

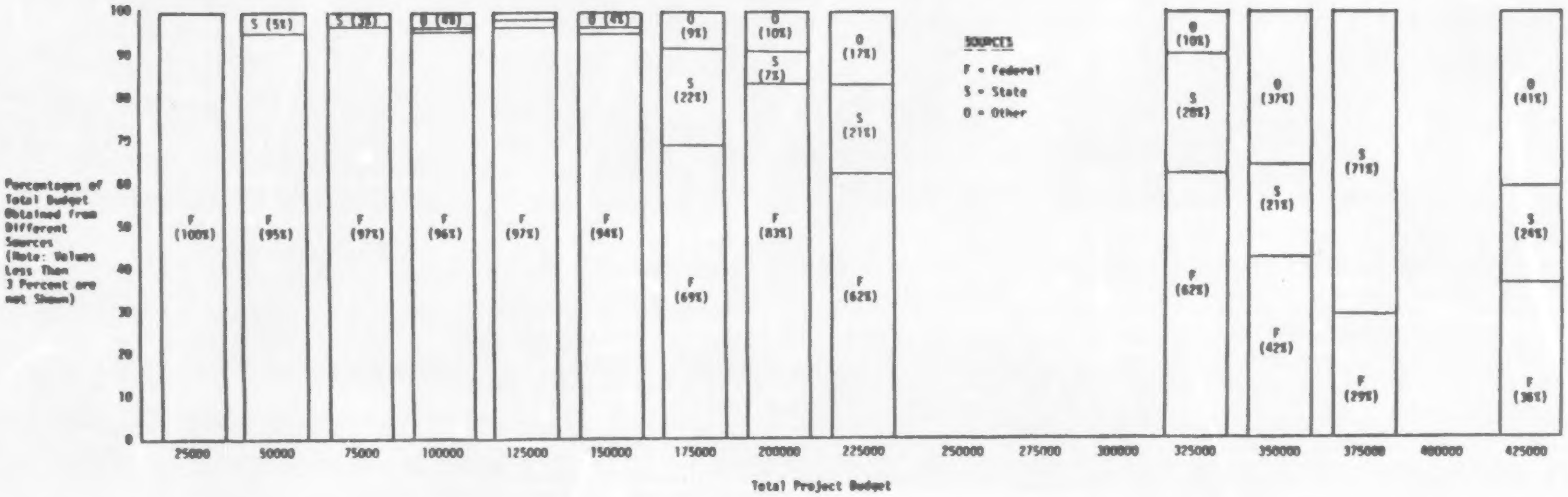


Figure 4-14. Percentages of Total Project Budget Obtained From Different Sources, for Varying Levels of Total Budget

represents the total budget of a given project; each bar in the diagram represents projects falling within a $25,000 range on total budget, centered around the dollar value shown below that bar. The vertical axis indicates the percentages of that total budget (i.e., of 100 percent) accounted for by Federal funds, state funds, and other funds. (Note: values smaller than 3 percent are not shown in the figure.) It can be seen that, as the total budget increased, the percentage of that total accounted for by Federal dollars tended to decrease. Above the $325,000 budget level, in fact, Federal funding accounted for substantially less than half the total project budget. Stated in slightly different terms, the Federal contributions to project budgets varied much less widely than did the total budgets.

Most projects received in-kind aid from their host institutions, in addition to their direct dollar contributions from different sources. (See Appendix 4-19). Almost 90 percent of the projects reported that they received in-kind contributions of office and/or classroom space, 55 percent reportedly received free instructional services, 40 percent reported free counselor services, and 31 percent reported in-kind clerical assistance. Other reported in-kind services were telephones and/or postage (51 percent), office supplies (57 percent), and instructional supplies (46 percent).

Figure 4-15 shows the projects' expenditures, per participating student, for administration (costs associated with the Project Director, other administrators, and clerical support), and for direct service delivery (student employees, instructional specialists, counselors, and regular instructional staff). Expenditure figures indicated for "State Funds," and those shown for "Other Funds", are based on the subsets of projects receiving such funds. As can be seen in Figure 4-15, projects tended to allocate their Federal and state funds between administrative and service-delivery costs in different proportions than they allocated the funds they received from other sources. State funds were split evenly between administrative and service costs, and Federal per-student expenditures for administration were only 20 percent smaller than those for service delivery. By contrast, per-student expenditures of "other" funds were over twice as high for service delivery as for administrative costs.

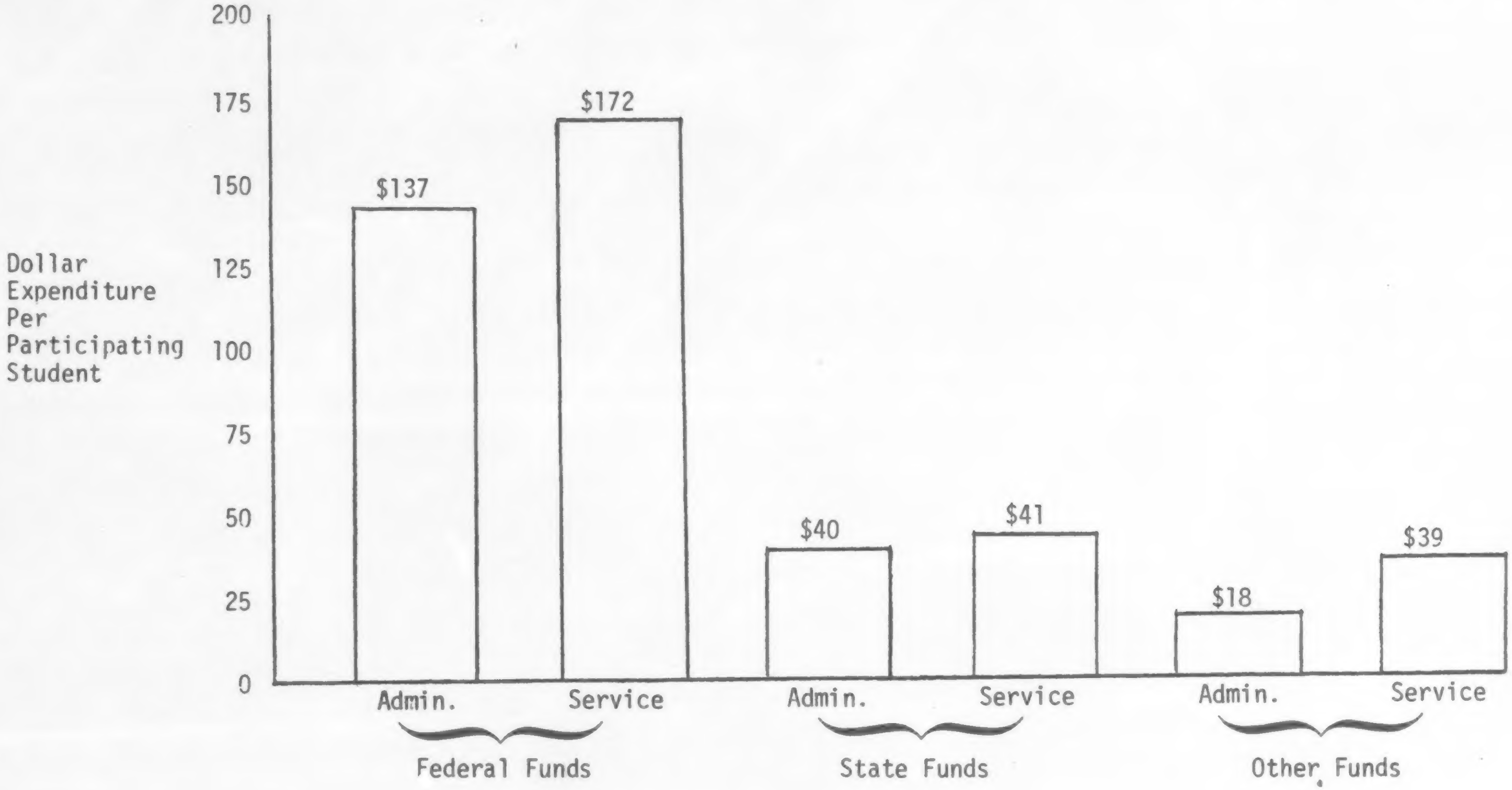


Figure 4-15. Project's Per-Student Allocation of Federal, State, and Other Funds for Administrative and Service-Delivery Costs

H. Projects' Administrative Policies and Procedures

One area of considerable interest in this study is how projects and students come together, i.e., how the projects identify students eligible for participation, and how students learn about services offered by the projects. Each Project Director was asked what sources his/her project used to identify eligible students, and was allowed to check all applicable sources in a list provided. The results are shown below in Figure 4-16. The most common source of information reported was the registrar's or admissions office, with over 80 percent of the Project Directors checking this category; least cited were high school sources such as referrals by recruitment programs, Upward Bound, or Talent Search (26 percent).

Project Directors were also asked to check all sources which they believe students use to learn of project services. As indicated in Figure 4-17, the source most often cited by the Project Directors (62 percent) was other participating students; student services in the institutions were also reported (50 percent) to provide considerable information about the projects.

Student needs for specific services are determined, according to the Project Directors, by a variety of different approaches. The Project Directors were asked to indicate, for each approach, whether that approach was used "never", "sometimes", or "usually". As Figure 4-18 shows, the three most common methods of identifying such needs are through staff interviews with students, by staff evaluation of students' academic records, and by the students' own requests. Counseling and faculty assessments were reportedly the least frequently applied techniques.

Over half the Project Directors reported that participation in project services is "never" mandatory for students found in need of those services; fewer than 2 percent reported that such services are "always" mandatory. These data, combined with the preceding information about the large role played by students in determining their own service needs, suggest that most institutions and projects view project participation as an opportunity for students rather than an obligation, and few take a highly directive role in that respect.

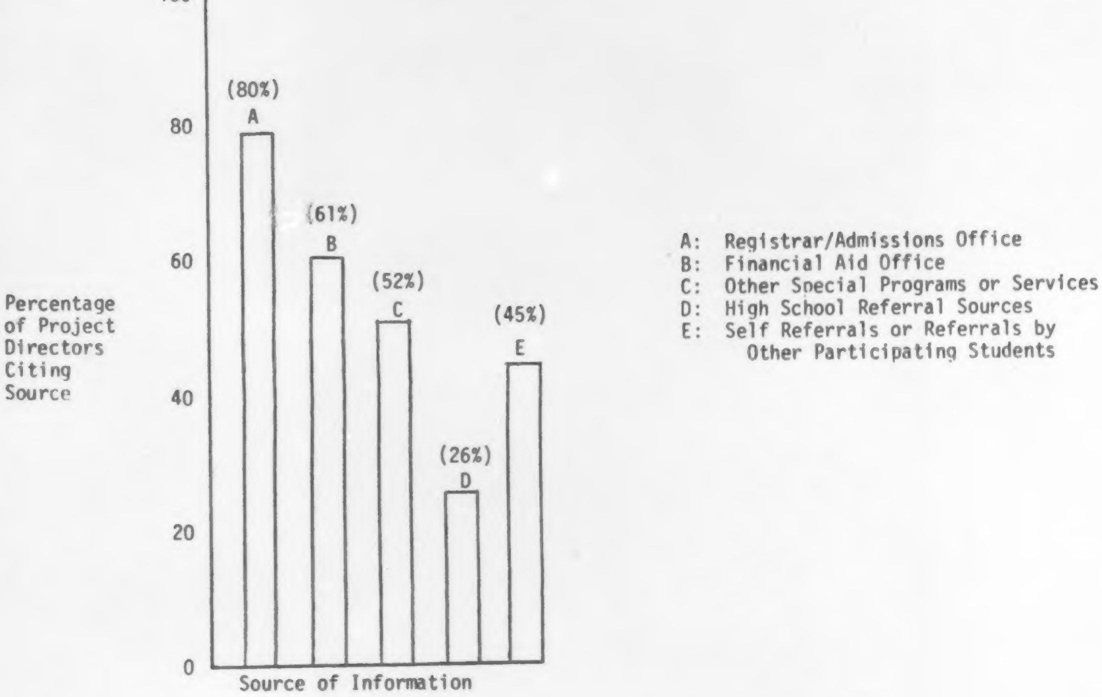


Figure 4-16. Percentages of Project Directors Reporting Project Use of Different Information Sources to Identify Eligible Students

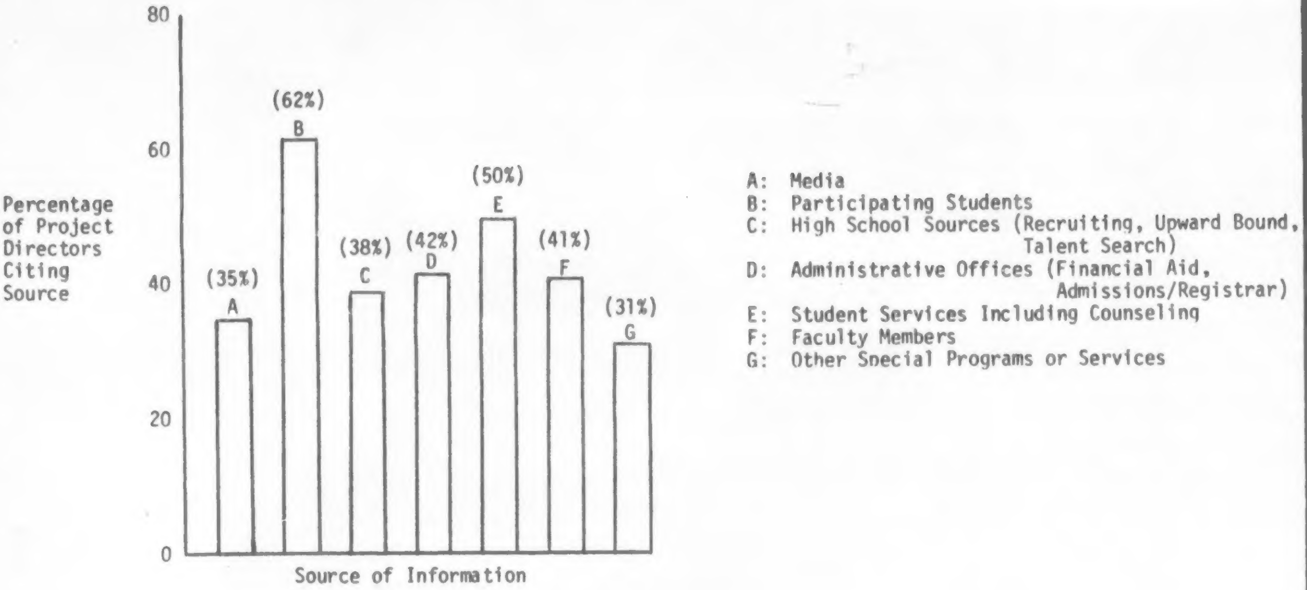


Figure 4-17. Percentages of Project Directors Reporting Student Use of Different Information Sources to Learn of Projects

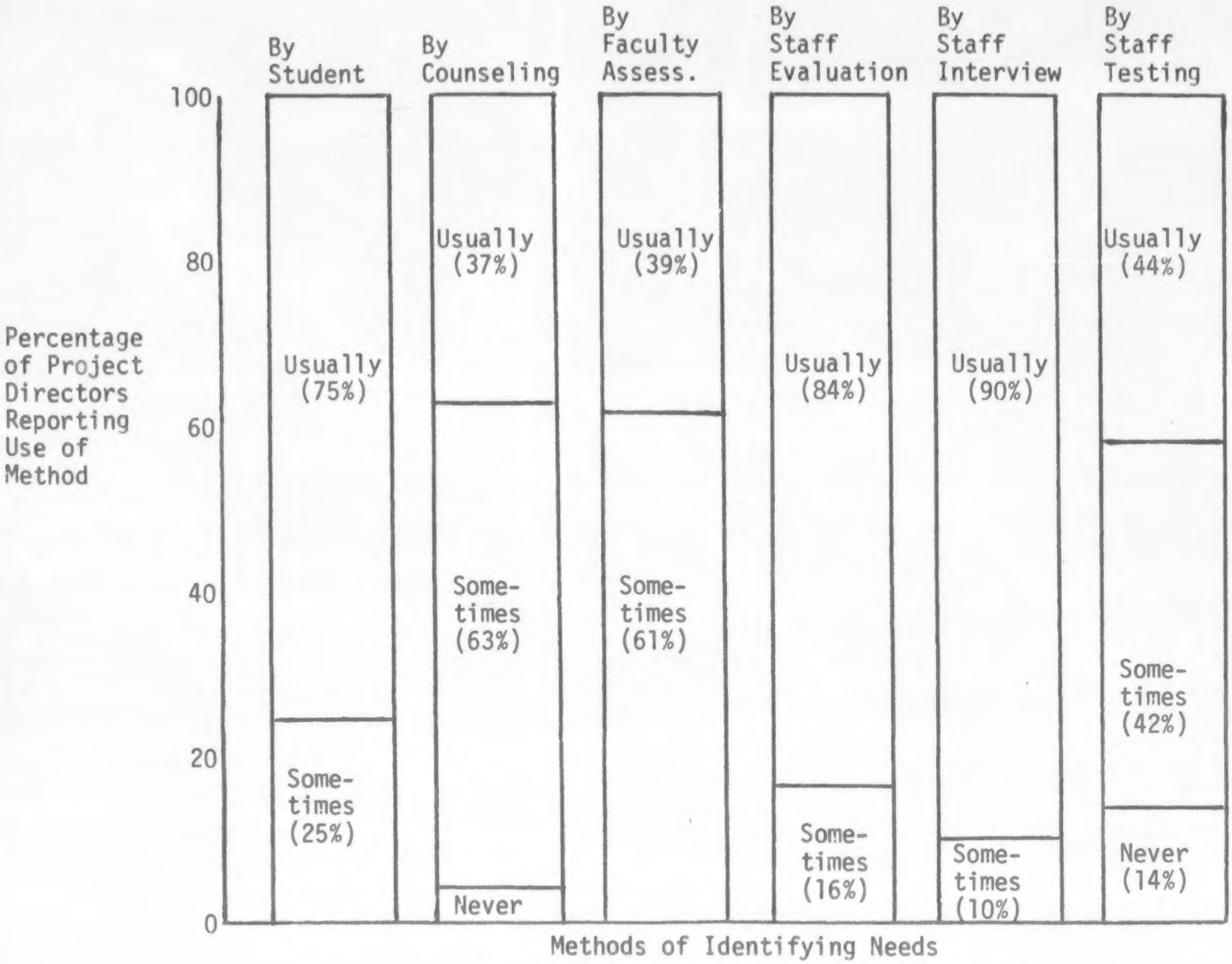


Figure 4-18. Percentages of Project Directors Reporting Use of Different Methods to Determine Students' Needs for Services

This general pattern of flexibility and informality, rather than of hard-and-fast rules, also applies to the question of how decisions are made to end project services to a student. Over a third of the Project Directors reported that their projects had no formal policies regarding the termination of services; another 22 percent indicated that a student "continuously maintains some affiliation with the Project as long as he remains at the institution;" and almost 17 percent said that the students decide entirely on their own initiative when to leave the project. Only 27 percent of the Project Directors indicated a strong role of project staff in determining when services to students should be ended.

Finally, Project Directors were asked who had the decision authority on various kinds of decisions directly affecting the project operations. Figure 4-19 shows the responses grouped into two general categories. One category represents projects in which the decision authority resides within the project, i.e., with the Project Director, the project staff, the students, or some combination of those individuals. The second category represents projects in which the final decision authority lies outside the project, i.e., with institutional administrators (defined in this study as the president, academic dean, and grants officer). In two areas--hiring and firing of project staff, and project budget allocations--decision authority lies outside the project administration and staff in appreciable percentages of the projects. In the case of decisions on staff hiring and firing, which 32 percent of the Project Directors reported were made by institutional administrators, one possible implication is that project hirees have institutional tenure. The intent in presenting these findings is not to suggest that outside decisions are better or worse than within-project decisions, but simply to note the variations in degree and areas of project autonomy.

I. Project Interactions With Physically Handicapped Students and With Students of Limited English-Speaking Abilities

Approximately 87 percent of the projects reported that they had some physically handicapped clients. (As indicated in Chapter 2, the study sample was designed to exclude any projects that served only handicapped students.) Of the projects

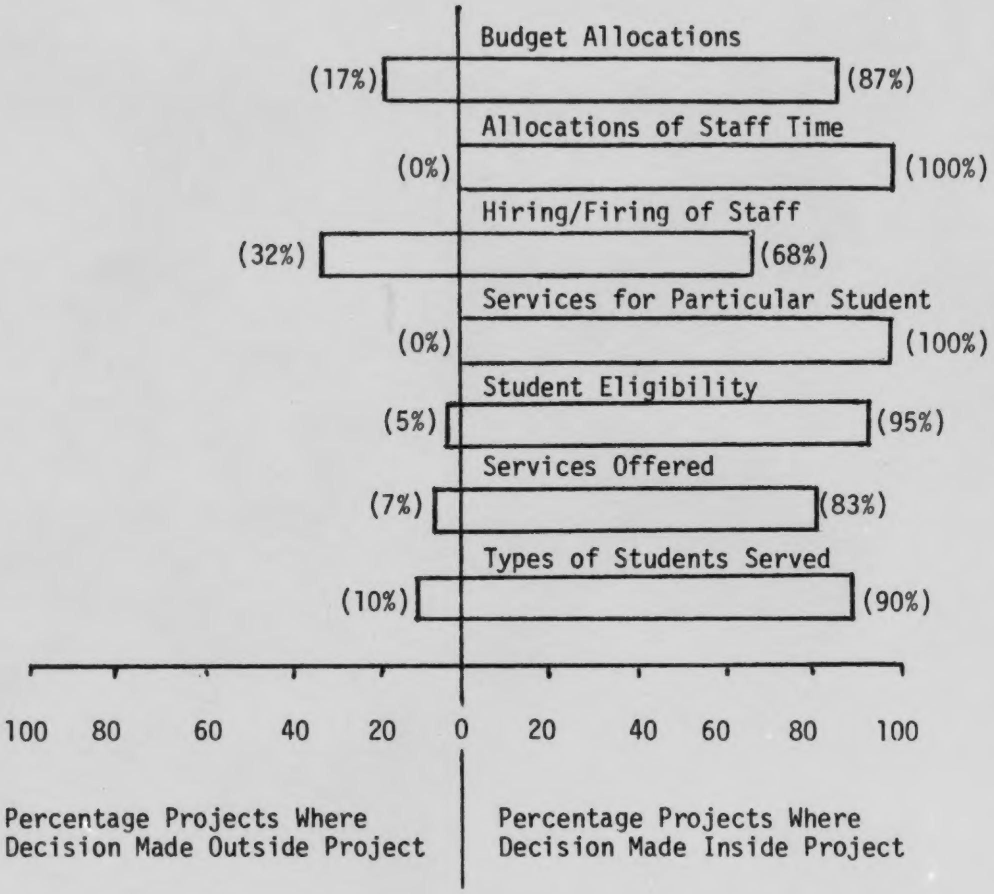


Figure 4-19. Distribution of Projects/Institutions Where Decisions Made Inside vs. Outside Project

that reported having such clients, 74 percent stated that they provided special services exclusively or specifically designed for the physically handicapped. Some of the specific types of services reported are shown in Figure 4-20. The most frequently reported services involved instructional support such as the use of readers or other special equipment designed to aid the handicapped. Almost a fourth of the projects reported giving aid to physically handicapped clients in getting to and from or around the campus.

A somewhat smaller percentage (62 percent) of the projects reported having clients with limited English-speaking abilities. All of those projects indicated that they provided some kind of special services designed exclusively or specifically for students with limited English-speaking abilities. The specific types of services reported are shown in Figure 4-21. It is difficult to interpret these figures, since, even added together, they come to considerably less than the percentage of projects claiming to provide some kinds of services specially designed for these students.

Project Directors were asked how much interaction there was between their physically handicapped clients and other project clients, and also how much interaction there was between clients with limited English-speaking abilities, and other project clients. The responses are represented in Figure 4-22; percentages shown in this figure are based on only the projects that claimed to have phsysically handicapped or limited-English-speaking clients. It appears from the figure that, at least as perceived by the Project Directors, participating students with limited English-speaking abilities were somewhat more isolated from other clients than those with physical handicaps. This is not a surprising finding, of course, since speech is normally the major mode of social interaction.

J. Projects' Summer Activities

Around 72 percent of the projects reported that they had project activities during the summer. Of the projects reporting no summer programs, 15 percent were in institutions that had no summer sessions at all.

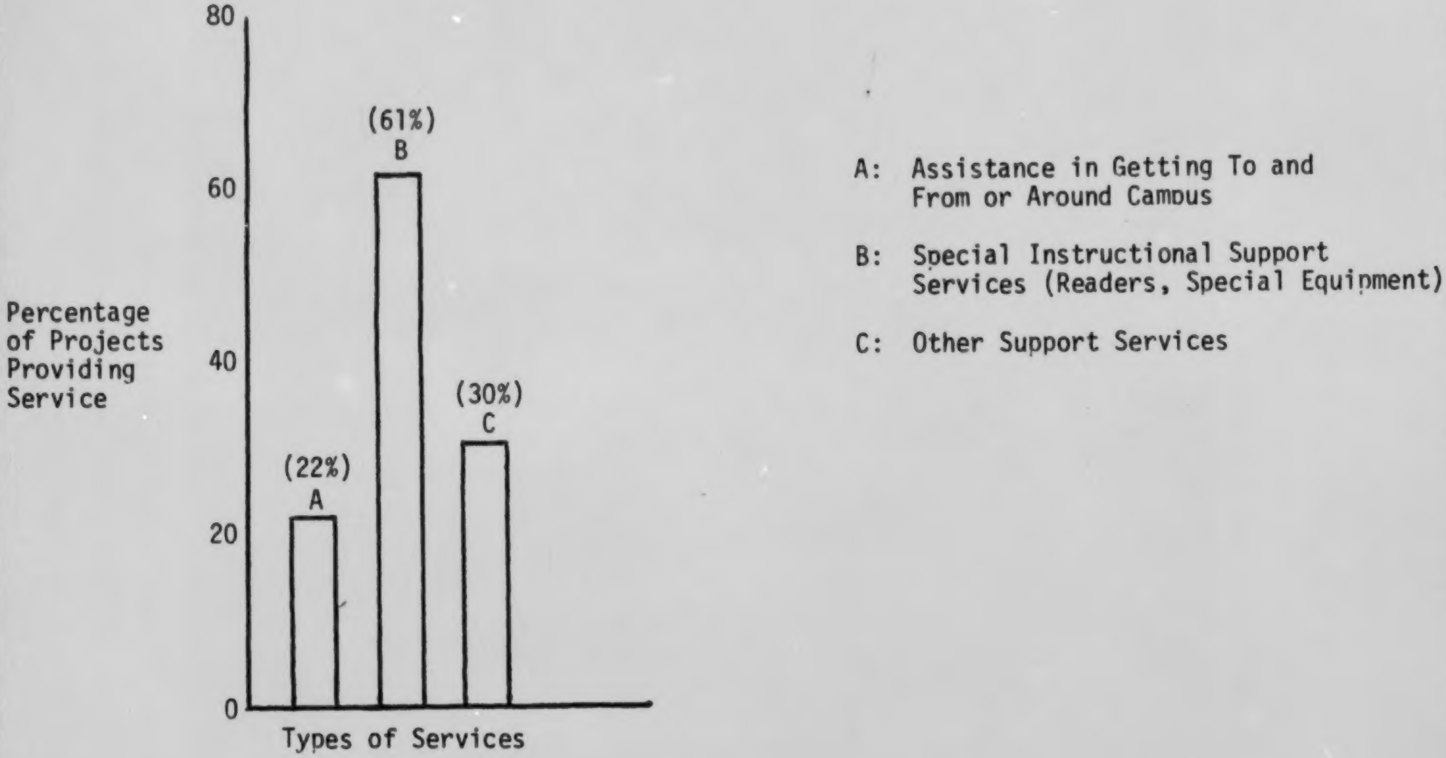


Figure 4-20. Percentages of Projects Having Handicapped Students That Provide Different Types of Services to Those Students

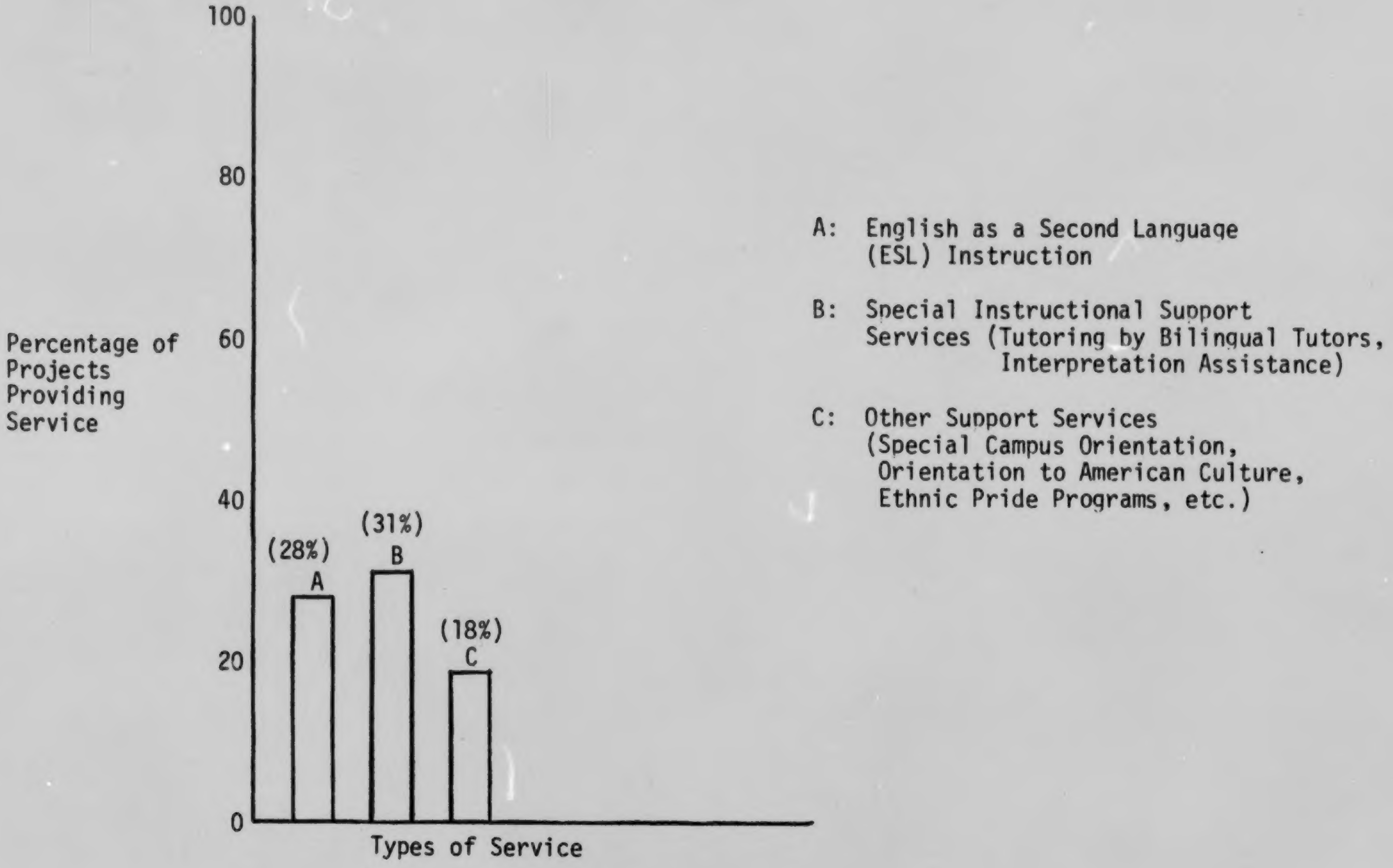


Figure 4-21. Percentages of Projects Having Students With Limited English-Speaking Abilities That Provide Different Types of Services to Those Students

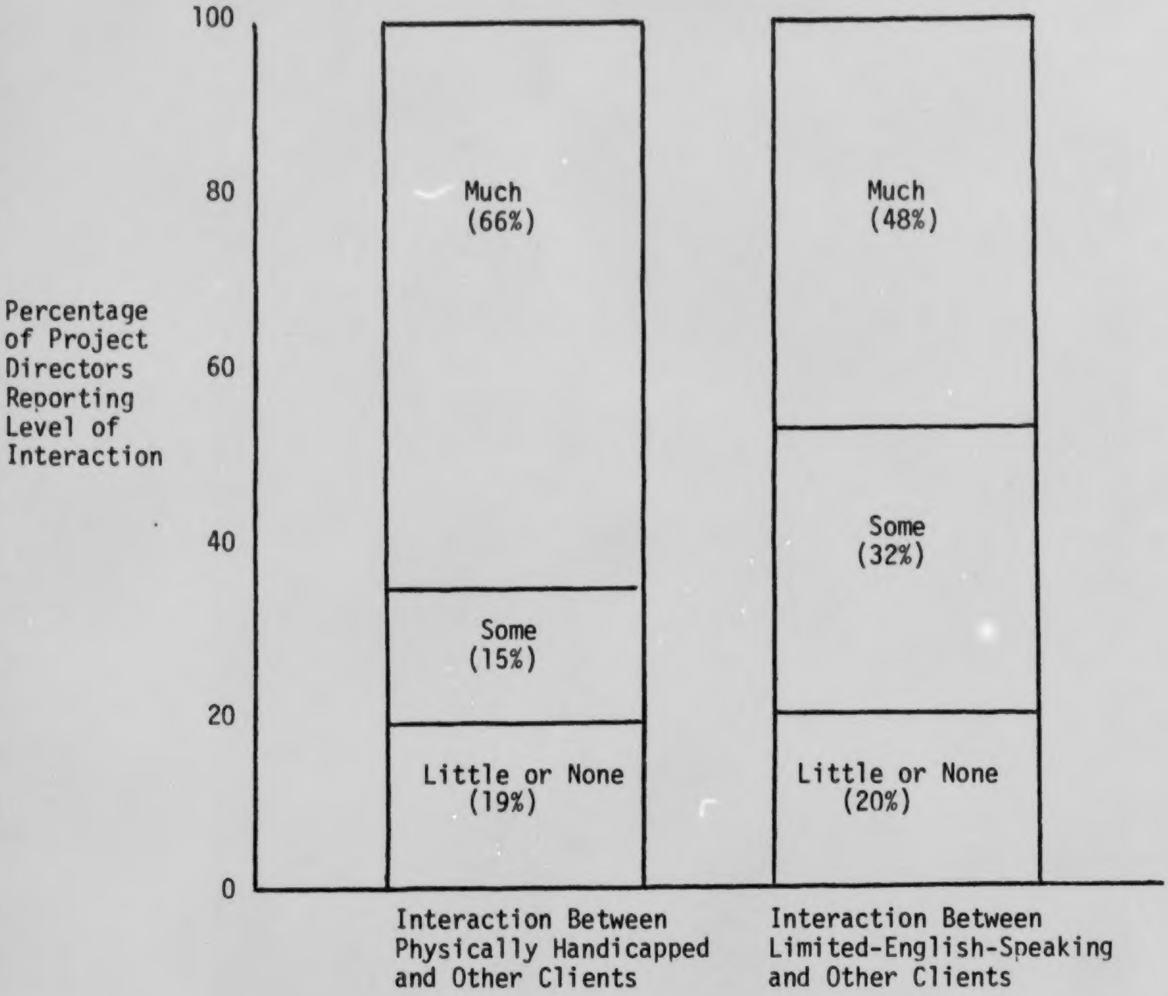


Figure 4-22. Percentages of Project Directors Reporting Different Levels of Interaction Between Limited-English-Speaking Clients, and Physically Handicapped Clients, and Other Clients

Of the projects with summer components, virtually all indicated that their summer activities included counseling, needs assessment, and referrals to other agencies or services. Only 30 percent of these projects offered instructional services during the summer, 23 percent provided orientation services, and 45 percent provided cultural services (e.g., multicultural awareness seminars or workshops, career education, health education). The projects' summer components were generally quite small, having, on the average, budgets of around $17,000, around 8 or 9 staff members (many of whom were part-time), and about 50 participating students.

K. Project Directors' Perceptions of Staff's Focus on Student Needs, and Success in Meeting Those Needs

Project Directors were asked what percentage of time their staff members spent in attempting to solve various kinds of student problems. They were told that the answers were not expected to add up to 100 percent, as it was recognized that the staff members have other duties beyond their direct attention to student problems (e.g., administrative and reporting functions). The Project Directors' responses to the question are represented in Figure 4-23. Not surprisingly, academic problems were felt to occupy the most staff time, with all other types of problems receiving considerably less staff attention.

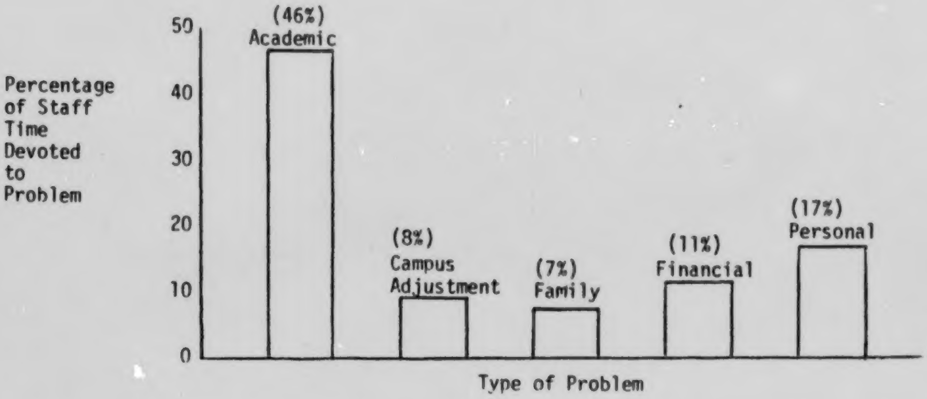


Figure 4-23. Percentages of Project Staff Time Spent on Different Types of Student Problems as Reported by Project Directors

Project Directors were also queried about their staff's level of success in solving these different types of student problems; alternative levels from which the Project Directors were asked to choose included Very Successful, Generally Successful, Somewhat Successful, and Not at All Successful. In the case of academic problems, 95 percent characterized their staffs as Very Successful or Generally Successful. A somewhat lower percentage claimed Very Successful or Generally Successful staffs for campus adjustment problems (83 percent), financial problems (81 percent), personal problems (77 percent), and family problems (41 percent). While these perceived levels of success are quite favorable, they are not as consistently positive as might have been expected from the Project Directors' almost universal denial (see Section E of this chapter) that their staff had any areas of needed improvement.

CHAPTER 5. INTERACTIONS BETWEEN PROJECTS AND INSTITUTIONS

Whereas Chapter 4 was concerned with basic descriptive data on the SSDS projects, and on the postsecondary institutions in which those projects operate, this chapter focuses on the nature of the interactions and relationships between the projects and their host institutions. It first examines the degree of conformity or disparity between institutional and project goals, and the projects' academic credibility within the institutions, as perceived by institutional administrators and/or Project Directors. Next, it presents data on the Project Directors' interactions with, and decision-making role in, the operations and administration of host institutions. Finally, the chapter discusses the perceived degree of institutional responsiveness to project needs, and the projects' perceived impact on participating students and on the host institutions in general.

A. Relationships Between Institutional and Project Goals

It seems logical to expect that the expressed goals of SSDS projects and of the projects' host institutions, and the degree of conformity or dissonance between those two sets of goals, might have considerable bearing on the projects' operations. For this reason, Project Directors were asked to select, out of a list of possible objectives, the four goals that they considered most important for their projects. In addition, Project Directors and institutional administrators were independently asked to select from a longer list* the most important goals of the host institutions. All of these goal selections are summarized in Table 5-1. The table shows that overall, the most frequently designated institutional goals were "Developing students' academic/cognitive skills," "Helping students learn to make independent decisions," "Giving each student individual attention," "Remedying academic deficiencies of disadvantaged students," "Helping students clarify career interests," and "Preparing students to compete in the labor market."

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*Several of the goals listed as possible institutional goals were not included in the list of potential project goals, because they were considered clearly inapplicable, or because by the regulations defining SSDS they had to be project goals.

Table 5-1. Percentages of Respondents Selecting Goals as Among the Most Important Institutional or Project Goals

GOALS	Percentage Administrators Selecting Institutional Goal	Percentage Project Directors Selecting Institutional Goal	Percentage Project Directors Selecting Project Goal
Retention of all freshmen thru degree attain.	17.54	32.47	*
Giving each student individual attention.	47.12	25.72	55.12
Helping disadvantaged students to succeed.	26.92	23.82	*
Developing students' social skills.	0	1.20	*
Developing students' academic/cognitive skills.	47.36	59.86	68.46
Remedying academic deficiencies of disadv. stds.	35.29	38.95	70.88
Developing students' aesthetic awareness.	1.20	0.0	*
Developing stds.' civic, cultural & political awaren.	6.24	3.01	*
Developing students' consumer awareness and skills.	1.74	0.0	*
Making institution one of the most respected academ.	24.20	4.62	*
Helping students analyze values and beliefs.	23.68	23.62	*
Helping students clarify career interests.	48.22	25.56	28.42
Helping students develop self-confidence & esteem.	8.40	14.22	50.78
Helping students learn to make independent decisions.	35.00	50.09	*
Develop an enthusiasm for learning in students.	13.12	16.47	*
Preparing students for advanced study.	8.38	19.96	6.40
Preparing students to compete in the labor market.	37.76	36.78	2.37
Preparing stds. to assume leadership roles in society.	17.73	22.49	*

* No equivalent goals in list for projects.

Of the seven project goals listed, the most frequently selected by Project Directors were "Remedying academic deficiencies of disadvantaged students," Developing students' academic/cognitive skills," and "Giving each student individual attention."

Separate analyses (see Appendices 5-1, 5-2) of administrators' and Project Directors' responses showed several differences in the patterns of goal selection for 2-year, public 4-year, and 4-year institutions. As compared with the other two types of institutions, the _institutional_ goals selected by both administrators and Project Directors in _private 4-year colleges and universities_ were considerably more likely to include "Helping students analyze values and beliefs," "Developing students' academic/cognitive skills," and "Preparing students to compete in the labor market," and _less_ likely to include "Giving each student individual attention." In addition, Project Directors in private 4-year institutions were more likely to designate "Giving each student individual attention" and "Developing students' academic/cognitive skills" as major _project_ goals than were Project Directors in other types of institutions. Another pattern of differences in responses was that both administrators and Project Directors in _2-year colleges_ were _less_ likely to select as institutional goals, "Making the institution one of the most respected academically," "Helping students learn to make independent decisions," and "Preparing students to assume leadership roles in society;" not unexpectedly, these differences appear to reflect lower aspirations on the part of 2-year colleges for their students and their own academic standing.

It is also of interest to compare the Project Directors' views of institutional goals with their selections of high-priority project goals, as presented in Table 5-2. This table shows only the seven goals that were included in the original lists for both institutional and project goals. The first column after the list of goals indicates the percentage of Project Directors who designated a goal as being particularly important for the SSDS project but not for the host institution. The second column gives the percentage of Project Directors designating a goal as important for the institution but not for the project, while the final column shows the percentage designating a goal as important to both the project and the institution.

Table 5-2. Percentages of Project Directors Selecting Goals as Among the Most Important Institutional and/or Project Goals.

PROJECT GOALS	Percentage Project Directors Selecting Goal for Project Only	Percentage Project Directors Selecting Goal for Institution Only	Percentage Project Directors Selecting Goal for Both
Developing students' academic/cognitive skills.	21.83	13.22	46.64
Helping students clarify career interests	19.70	16.83	8.73
Preparing students to compete in the labor market.	1.20	35.62	1.17
Preparing students for advanced study.	0.00	13.55	6.41
Helping students develop self-confidence and esteem.	42.90	6.35	7.88
Remedying academic deficiencies of disadv. students.	46.00	14.08	24.88
Giving each student individual attention.	35.58	6.18	19.55

In the perceptions of the Project Directors, at least, there would appear to be large disparities between the goals of the SSDS projects and those of the host institutions. In fact, only one goal ("Developing students' academic/cognitive skills") was considered by more than a fourth of the Project Directors to be of high priority for both the project and the institution. The goal of "Preparing students to compete in the labor market" was considered by 36 percent of the Project Directors to be an important goal of the institution but not of the project, whereas "Helping students develop self-confidence and self-esteem" was listed by 43 percent of the Directors as a high-priority goal for the project but not for the institution. Similarly, large percentages of the Project Directors believed that "Remedying academic deficiencies of disadvantaged students" and "Giving each student individual attention" were major goals for their projects but not for the host institutions. These perceived disparities in goals are not surprising, since the institutions have broader responsibilities than those of the projects, but they point to a source of potentially competing interests between the projects and the institutions in the setting of institutional policies affecting the projects.

B. Projects' Perceived Academic Credibility Within Institutions

Project Directors and administrators of the host institutions were independently asked to rate the projects' academic credibility on campus, using a five-point scale, where "1" indicated "poor" and "5" indicated "excellent." The results are shown below in Figure 5-1. The modal response for both groups of respondents was a rating of "4," or "good," but around a fifth of both groups gave ratings of "excellent" to their SSDS projects. Perhaps the most interesting finding is the very close agreement in the distributions of ratings made by the Project Directors and administrators. Separate analyses of the response data by type of host institution (2-year, public 4-year, and private 4-year) failed to yield any substantial or interpretable differences in patterns of ratings, although there was a tendency for the overall ratings to be slightly lower in the 2-year colleges (see Appendices 5-3, 5-4).

The institutional administrators' ratings of projects' academic credibility were examined in relation to several characteristics of the Project Directors; three of these sets of relationships are shown in Figure 5-2. While the variations in average ratings were fairly small, there was a significant tendency for higher ratings to be given to projects having Project Directors who perceived themselves as influential in shaping institutional policy, who spent moderate proportions (11%-50%) of their time on non-project campus activities, and/or who had higher administrative rank (Assistant Dean) within their institutions. No systematic relationship was found between the projects' ratings and the frequency of the Project Directors' interactions with other campus programs (see Appendix 5-5).

Project Directors were asked for their perceptions of how regular faculty members and regular (non-project) students felt about project students. A positive response was given if a Project Director felt that faculty members (or regular students) regarded project students as highly motivated, having to overcome special problems, deserving special assistance, and/or bringing a perspective that "adds to the campus and classroom environment." A negative response indicated a Project Director's perception that faculty members or regular students regarded project students as not belonging at the school, not

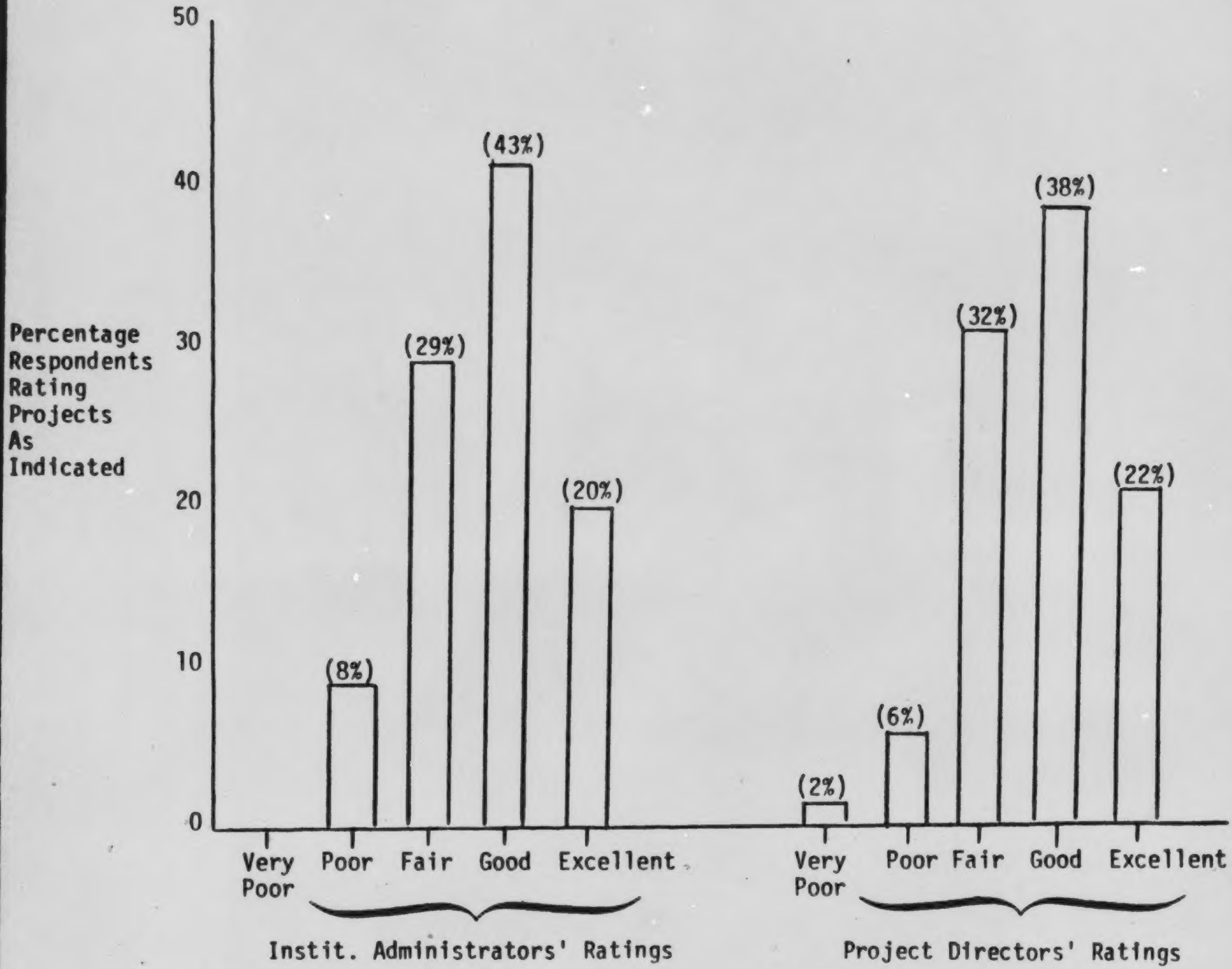


Figure 5-1. Project Directors' and Institutional Administrators' Ratings of Projects' Academic Credibility

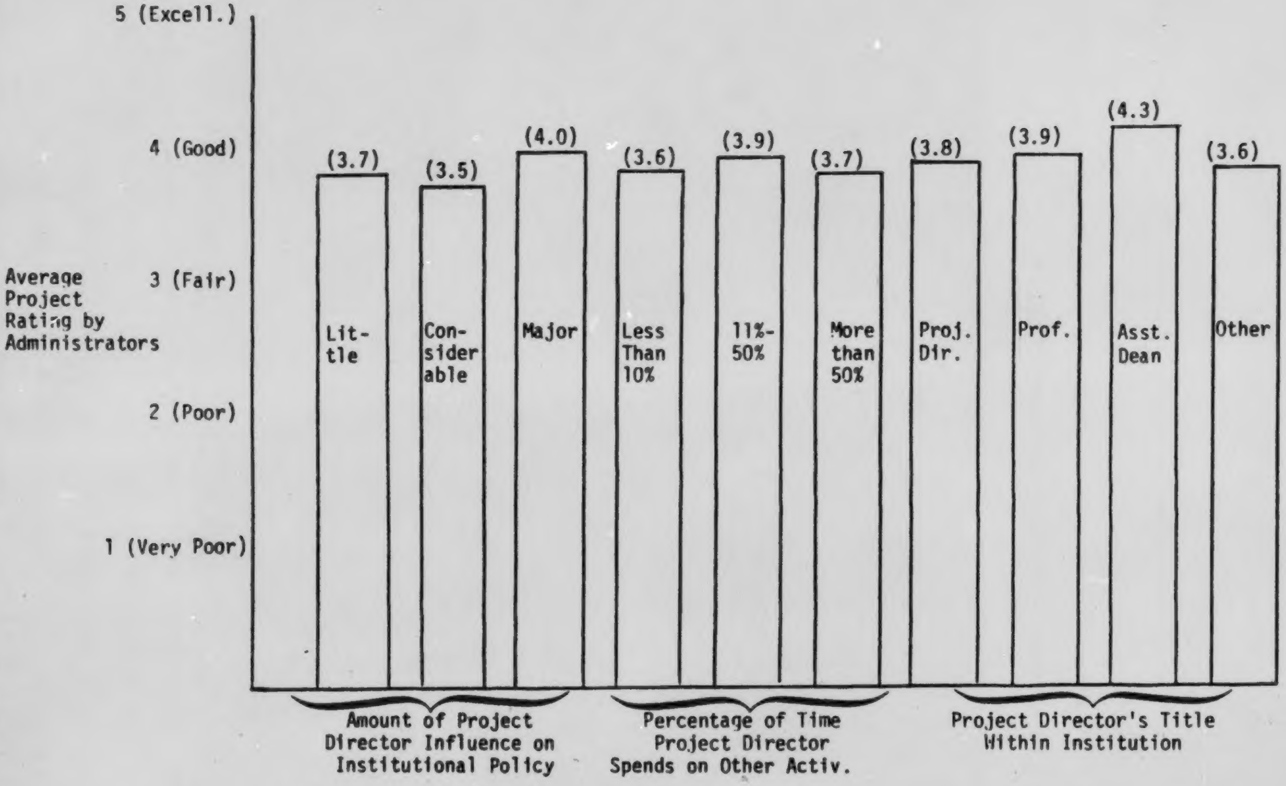


Figure 5-2. Institutional Administrators' Ratings of Project's Academic Credibility, for Different Project Director Characteristics

being interested in academics, and/or not being "very bright." A neutral response indicated no special opinion about project students, or a neutral, wait-and-see position.

Figure 5-3 shows the Project Directors' perceptions of faculty members' opinions of project students, by type of host institution. The modal response was neutral, and more Project Directors perceived positive than negative opinions toward project students on the part of regular faculty members. Overall, the perceived views of faculty members in 2-year colleges were somewhat less favorable than those in 4-year colleges and universities.

Project Directors' perceptions of regular students' opinions of project students are shown in Figure 5-4. It is clear that most Project Directors view students in general as much more favorable than regular faculty members toward project students. This is indicated by the considerably larger percentages of positive responses, and by the almost complete lack of negative responses. The one evident exception to this general rule is for public 4-year colleges and universities, where the pattern of responses closely resembles that for the perceived faculty opinions. One possible explanation is that Project Directors in the public 4-year institutions view the regular students in those institutions as having higher academic standards for themselves, and thus as having less tolerance of perceived academic deficiencies on the part of project students.

C. Project Directors' Interactions With Institutions and Role in Institutional Decision-Making

Project Directors were asked about the extent to which they participated "in decision-making conducted at the institutional level that affects the Project or its student participants." As indicated in Figure 5-5, most Project Directors viewed themselves as active participants in decisions impinging on their projects, with almost three-fourths saying that they participated "to a large extent" or "to a considerable extent" in such decisions. Furthermore, as is clear from Figure 5-6, they perceived themselves as being influential in the outcomes of those decisions; four-fifths of the Project Directors felt

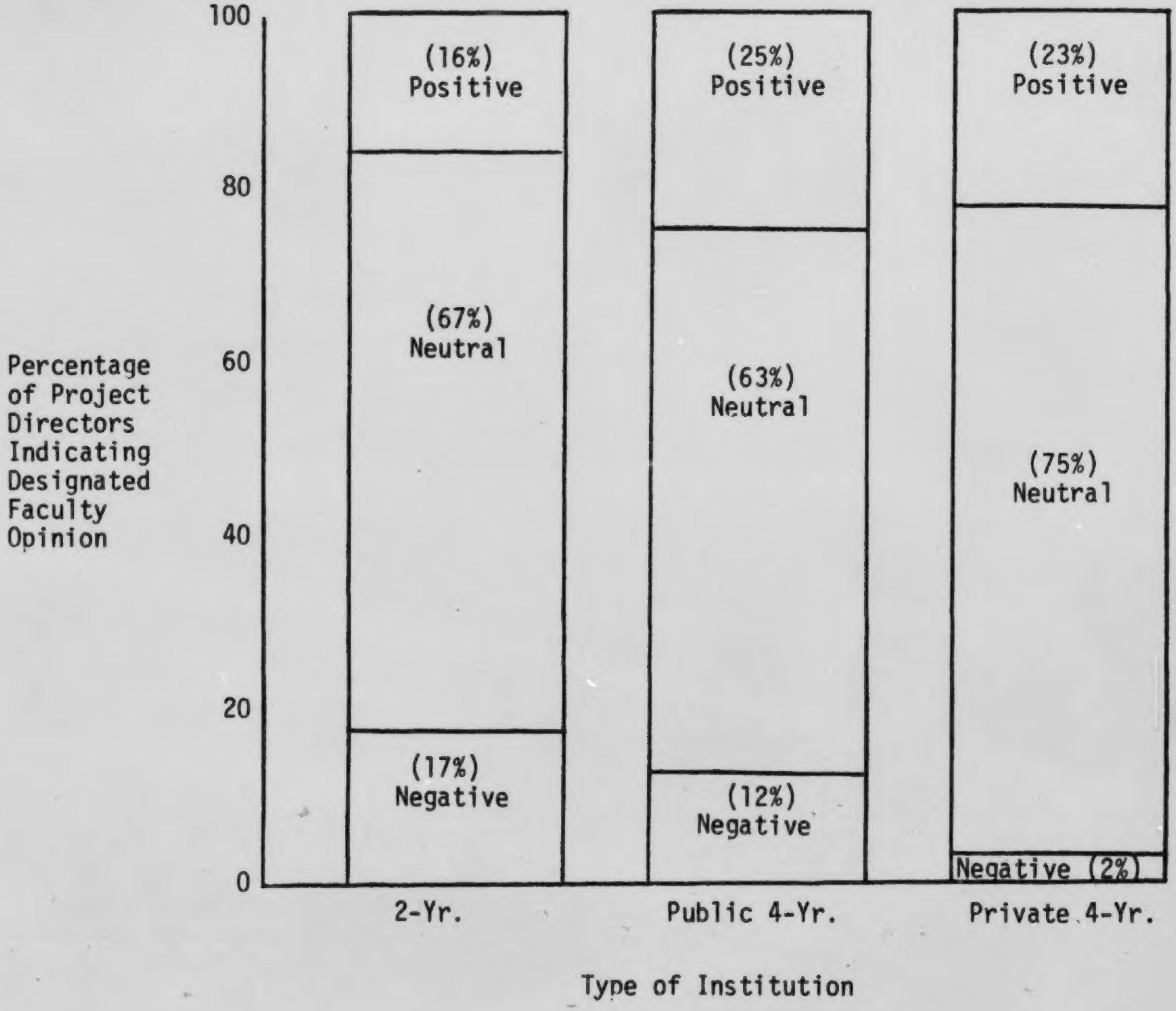


Figure 5-3. Project Directors' Perceptions of Faculty Members' Opinions of Project Students

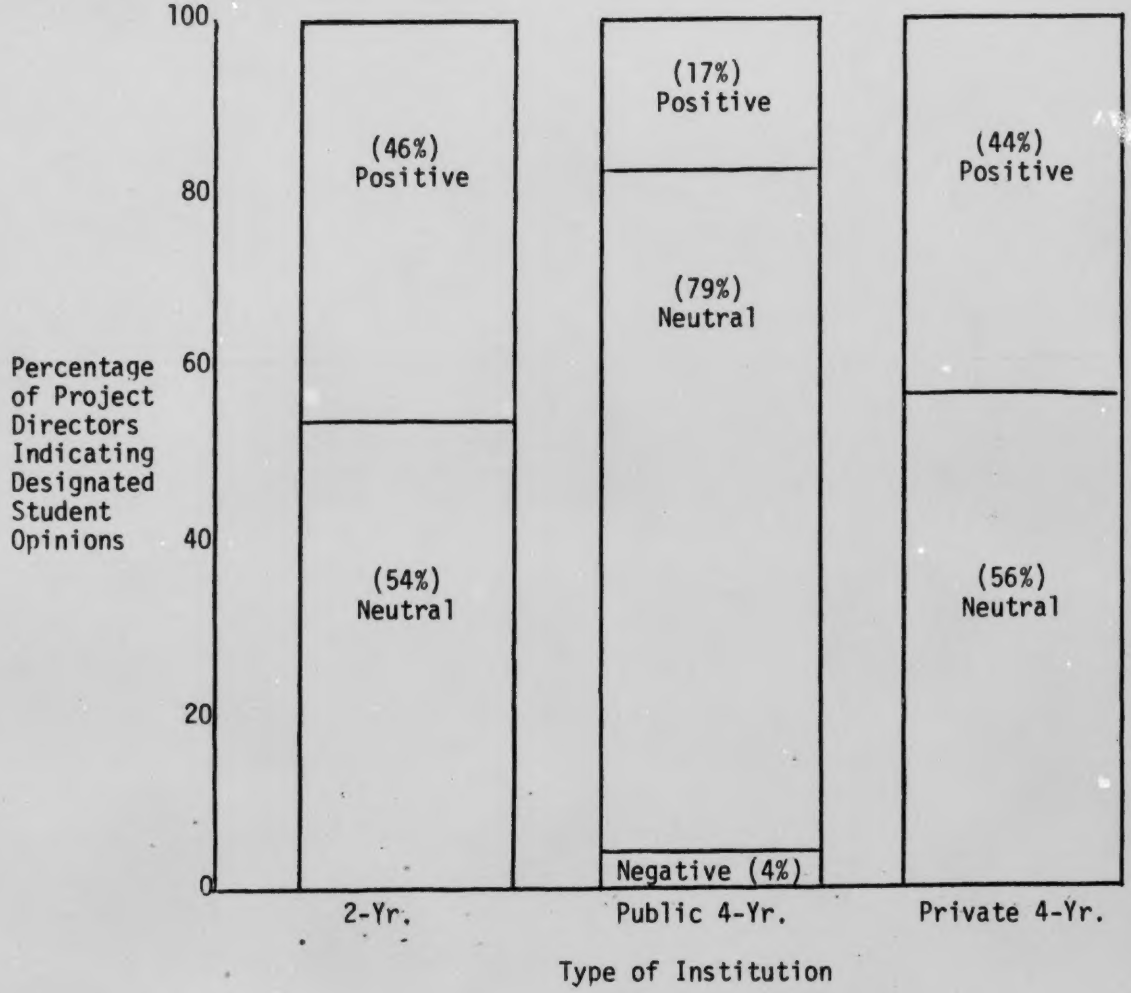


Figure 5-4. Project Directors' Perceptions of Regular Students' Opinions of Project Students

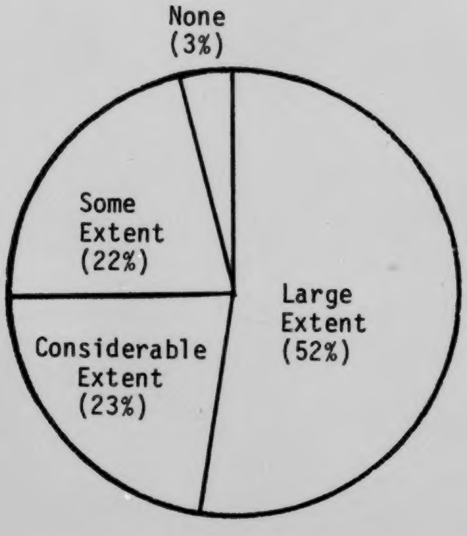


Figure 5-5. Percentages of Project Directors Reporting Different Levels of Participation in Institutional-Level Decision-Making

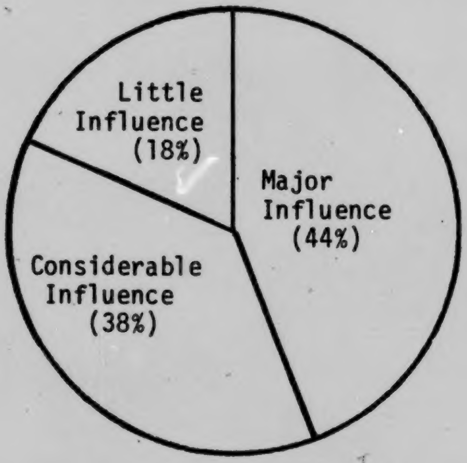


Figure 5-6. Percentages of Project Directors Reporting Different Amounts of Influence on Institutional-Level Decisions

they had "considerable" or "major" influence. The distributions of responses on these two questions (extent of involvement in (see Appendix 5-6), and influence on, decision-making) did not vary in any interpretable fashion for different types of host institutions (see Appendix 5-7).

Surprisingly few of the Project Directors indicated that they were members of various types of institutional committees, councils, or advisory boards. This would appear to contradict the Directors' claims of great influence in project-related institutional decisions, since the types of committees and councils about which they were queried are the very types that usually play strong roles in shaping institutional policy. Fewer than one fourth of the Project Directors claimed membership on more than two committees, councils, or advisory boards, and 15 percent were on no such groups.

Figure 5-7 shows the breakout of Project Directors reporting membership in different types of committees and councils. Not surprisingly, the most common membership was in panels or committees dealing with academic affairs; even here, however, membership might have been expected to be substantially larger, since SSDS projects are typically organized somewhere within the office of academic affairs. The other two most common types of membership, again for obvious reasons, are in groups concerned with financial aid or with special services. The "other" category represented in Figure 5-7 includes a wide variety of different types of groups, no one of which was reported by a large percentage of Project Directors.

As shown in Figure 5-8, different kinds of institutions had Project Directors with somewhat different patterns of committee/council membership. On the average, Project Directors in private 4-year colleges and universities participated in the largest numbers of such groups, with over half the Directors in those institutions having membership in more than two groups.

The data also suggest that Project Directors who belonged to more institutional committees and councils had more influence on institutional-level decisions affecting their projects, at least according to their own perceptions.

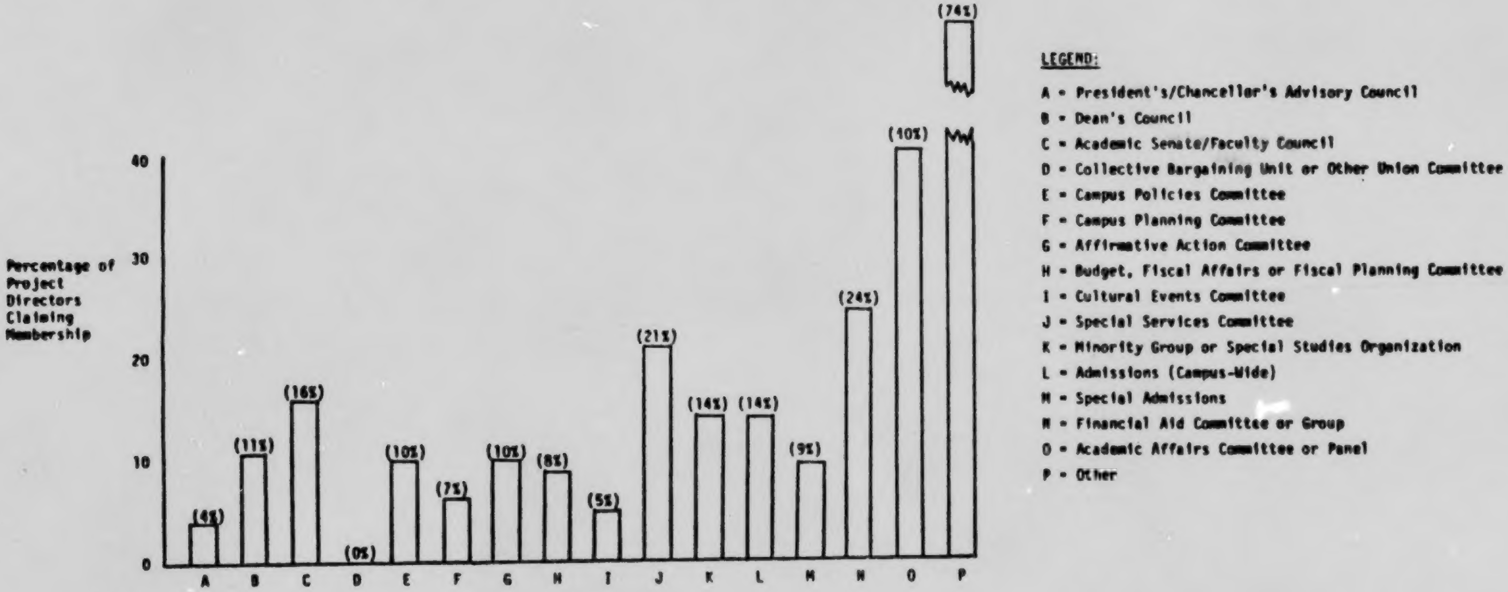


Figure 5-7. Percentages of Project Directors Claiming Membership in Different Types of Institutional Committees, Councils, and Advisory Boards

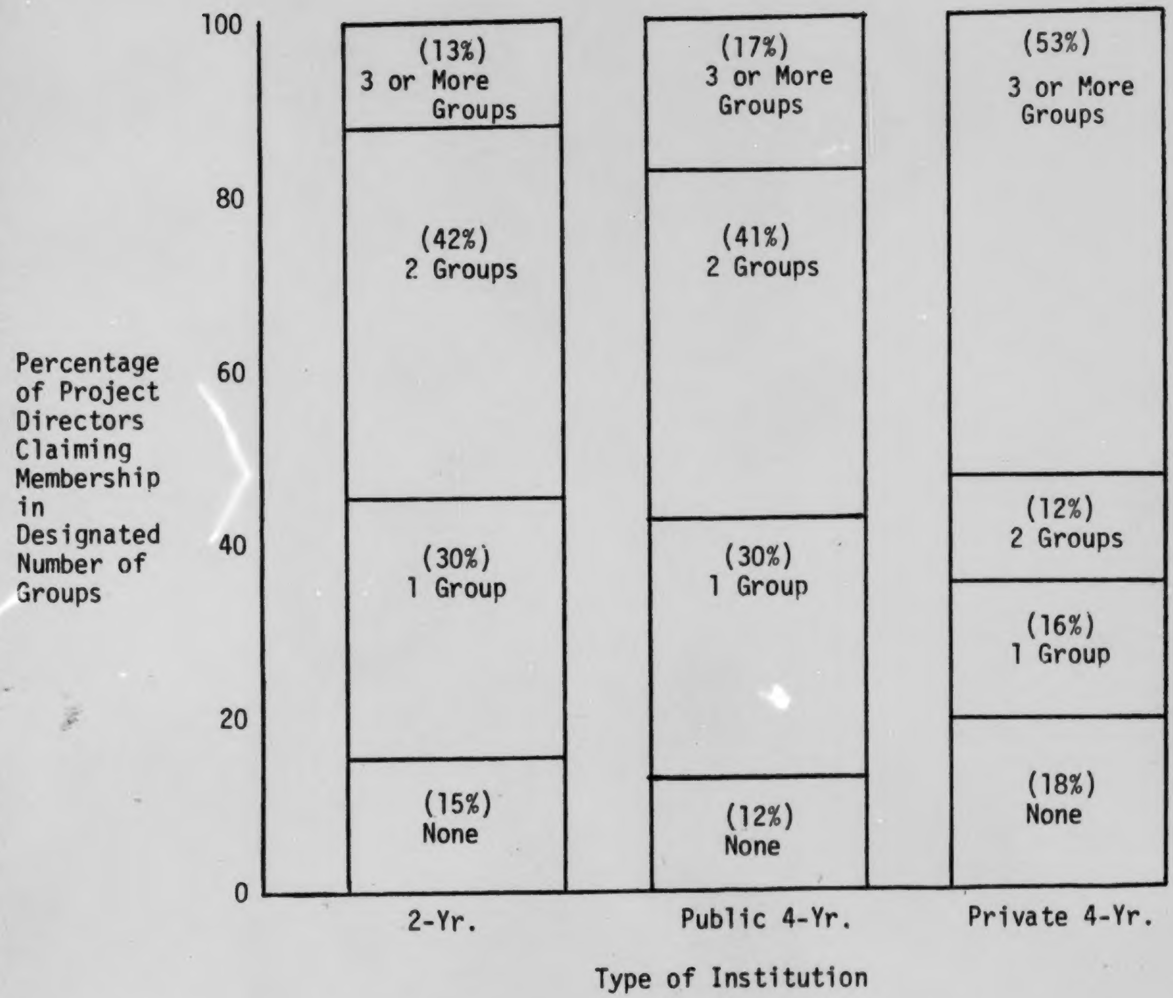


Figure 5-8. Percentages of Project Directors Reporting Membership in Different Numbers of Institution-Level Committees and Councils, by Type of Institution

Figure 5-9 shows this relationship rather clearly. For example, almost three-fourths of Project Directors who were members of more than two such groups felt they had "major" influence on decisions, compared with only 8 percent of Project Directors who belonged to no such group. Though it is not possible from the data to demonstrate directionality or causality, there is a strong suggestion that Project Director membership in multiple policy-shaping committees and councils is an important factor in exercising at least partial control over key institutional decisions that are likely to aid or hinder an SSDS project.

Finally, Figure 5-10 shows that Project Directors' membership in larger numbers of institutional committees and councils is associated with more mature projects, with more experienced Project Directors, and with Project Directors who have higher administrative positions in the institution's hierarchy. The first two of these findings probably reflect the fact that it takes time for a Project Director to work himself or herself into a position where he/she is asked to participate in important policy-shaping groups at the institutional level. The third relationship simply illustrates the expected correlation between two different indices of the Project Directors' status within the institutions' administrative structures: i.e., the Directors' administrative titles and their involvement in decision-influencing groups.

D. Institutional Responsiveness to Project Needs

Another issue of concern was the extent to which the host institutions were responsive to project requests concerning students, as perceived by the Project Directors or as evidenced by the existence of special institutional policies for students participating in project activities. As Figure 5-11 indicates, approximately a fourth to a third of the Project Directors believed their host institutions to be "very responsive;" the largest percentage of such positive responses was in the public 4-year colleges and universitites. Another two-thirds of the Project Directors overall indicated some institutional responsiveness but qualified their statements in some fashion, e.g., by indicating that the responsiveness was only partial or occurred only under certain conditions. Fewer than a tenth of the Project Directors perceived their institu-

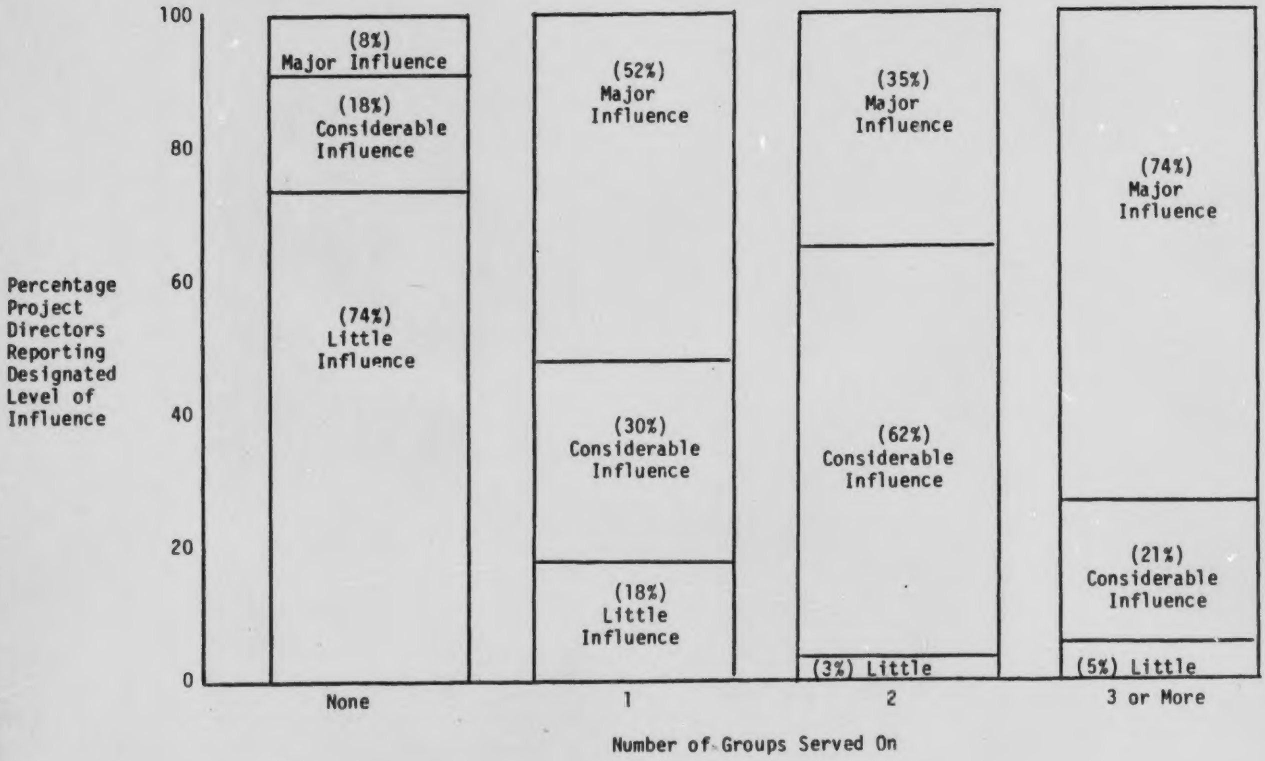


Figure 5-9. Project Directors' Self-Perceived Influence on Institutional Decisions, for Different Numbers of Institutional Committees and Councils Served on by Directors

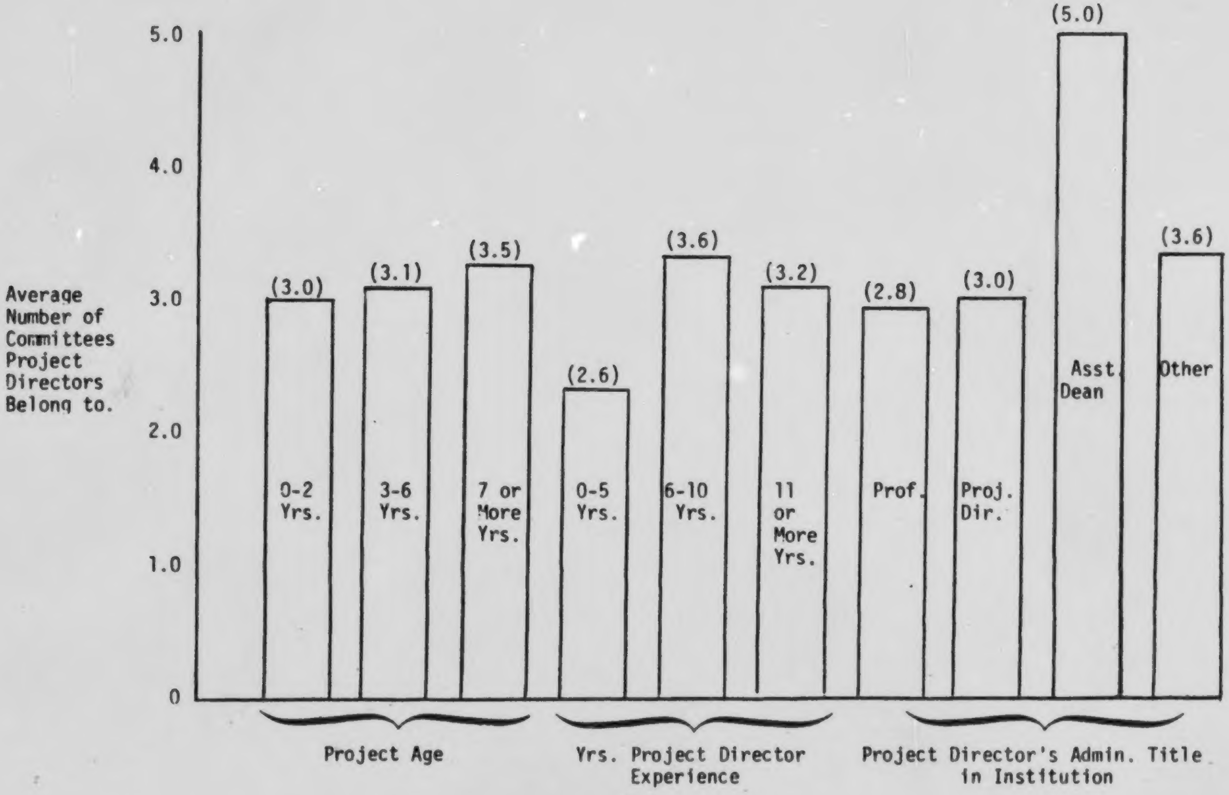


Figure 5-10. Average Numbers of Institutional Groups That Project Directors Are Members of, for Different Characteristics of Projects and Project Directors

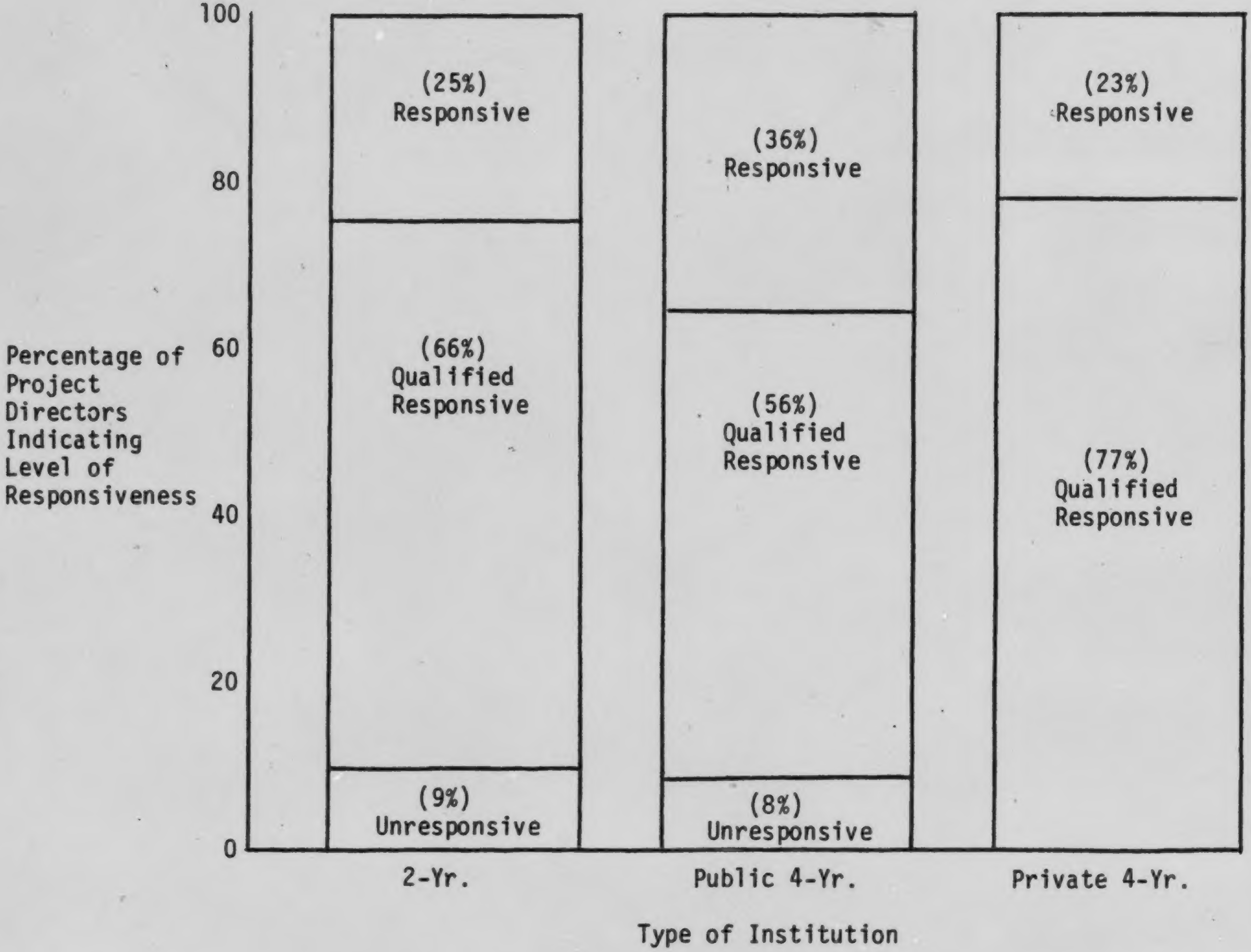


Figure 5-11. Perceived Responsiveness of Host Institutions to Project Needs, for Different Kinds of Institutions

tions as totally non-responsive; none of these was in a private 4-year college or university.

As another indication of institutions' responsiveness, institutional administrators were given lists of criteria or conditions often applied by institutions in selecting students to be admitted, to be put on probation, or to be dismissed from those institutions. The administrators were asked to indicate whether each criterion was applied equally to both project and non-project students; to non-project students only; more leniently to project students than to non-project students; or not applied at all. Table 5-3 summarizes the responses for 2-year colleges, public 4-year colleges and universities, and private 4-year institutions. Entries in the column labeled "Equally" are the percentages of institutions reportedly applying a criterion equally to project and non-project students. Entries in the column marked "Lenient" represent the percentages of institutions applying criteria more leniently to project students. For example, in the second row down of the "Lenient" column for public 4-year institutions, the figure 16.36 indicates that in 16.36 percent of such institutions, a low high school rank on the part of a student being actively considered for SSDS program participation would probably not weigh so heavily against his/her admission to the institution as it would for a non-project student, or perhaps a lower cut-point would be used in considering the project student's ranking. Similarly, in the 12th row down of the "Lenient" column for 2-year colleges, the figure 13.58 means that that percentage of such colleges are less likely to put a project student on probation (relative to other, non-project students) for a given (low) term grade point average. No figures are shown for the percentages of institutions applying the various criteria exclusively to regular (non-project) students, as all of those percentages were very low; across all institutions the highest such percentage for any criterion was 2.29 percent. Percentages of institutions not applying criteria to either project or non-project students are also not shown, as they can be approximated by subtracting the "Equally" and "Lenient" column figures from 100 percent.

Table 5-3. Percentages of Institutions Applying Criteria Equally to Project and Non-Project Students, vs. More Leniently to Project Students, in Matters of Admissions, Probation, and Dismissals

		Type of Institution					
		2-Yr.		Public 4-Yr.		Private 4-Yr.	
		Equally	Lenient	Equally	Lenient	Equally	Lenient
Admissions Requirements	High School Diploma	75.40	4.44	80.59	16.36	85.07	0.00
	Rank in High School	75.40	4.44	80.59	16.36	85.07	0.00
	High School Grades	1.21	12.50	30.94	24.91	37.31	16.42
	Achievement or Activities Test Scores	24.73	5.65	54.84	23.43	38.06	18.66
	English Composition Skills	23.25	3.23	14.04	16.67	23.13	16.42
	Course Requirements	7.66	4.44	22.35	8.54	30.60	16.42
	Teacher Recommendations	0.00	0.00	8.54	2.75	44.03	0.00
	Interview with Student	7.66	1.21	0.00	2.75	20.90	0.00
Conditions for Probation	Student is "unclassified"	4.44	0.00	12.54	0.00	14.93	0.00
	Insufficient Credits Currently Taken	4.44	4.44	15.35	2.75	58.21	0.00
	Insufficient Percentage of Credits Completed	39.65	1.21	22.39	0.00	54.48	24.63
	Term GPA Too Low	62.77	13.58	63.92	7.07	77.61	22.39
	Cumulative GPA Too Low	71.91	21.64	80.02	16.92	83.58	16.42
	Degree Requirements Not Completed in Time	3.23	2.42	9.81	0.00	22.39	16.42
Conditions for Dismissal	Term GPA Too Low	39.38	13.58	37.46	8.54	69.40	28.36
	Cumulative GPA Too Low	39.92	34.01	61.38	30.07	56.72	28.36
	Insufficient Percentage of Credits Completed	22.72	9.27	5.49	5.80	48.51	18.66
	Probation Terms Not Met	47.58	29.57	57.09	32.82	77.61	22.39

Overall, Table 5-3 indicates that project students were often given special (lenient) treatment on dismissals, and fairly often on admissions and probation. The finding with respect to dismissals can be traced to SSDS regulations, which limit the conditions under which host institutions can dismiss project students. The finding on admissions suggests a funnel effect in which some students are specially admitted to institutions with the specific intention that they will participate in project activities.

In comparing the data in Table 5-3 for different kinds of institutions, there appears to be no consistent trend of differences in percentages of "lenient" (toward project students) institutions with respect to probation or dismissals. With regard to admissions, 2-year institutions appear to give the least special consideration toward propective project participants. However, much if not all of this apparent difference may be attributable to the fact that many of the 2-year institutions do not apply stringent admissions criteria to any of their students; this is indirectly reflected in the lower percentage figures in the "Applied Equally" column for the 2-year college.

Finally, Figure 5-12 shows, not unexpectedly, that as the number of special policies for project students in an institution goes up, the Project Director perceives the institution as more responsive to project needs. For example, 43 percent of institutions having more than four such policies are considered responsive, compared with 26 percent of institutions having no such policies.

E. Perceived Project Impact on Institutions and Students

Several methods were used to obtain information about the perceived impact of the SSDS projects on their host institutions. First, a sample of regular (non-SSDS) faculty members in each institution were asked how much impact they believed the project had on their institution's student body, faculty, and administration. The results are summarized in Figure 5-13, by type of institution. The height of each bar in this figure represents the average impact value attributed by the respondents to their projects. For example, the leftmost column indicates that, for 2-year colleges, the average scale value assigned to project impact on institutional administration was 1.90 on a scale

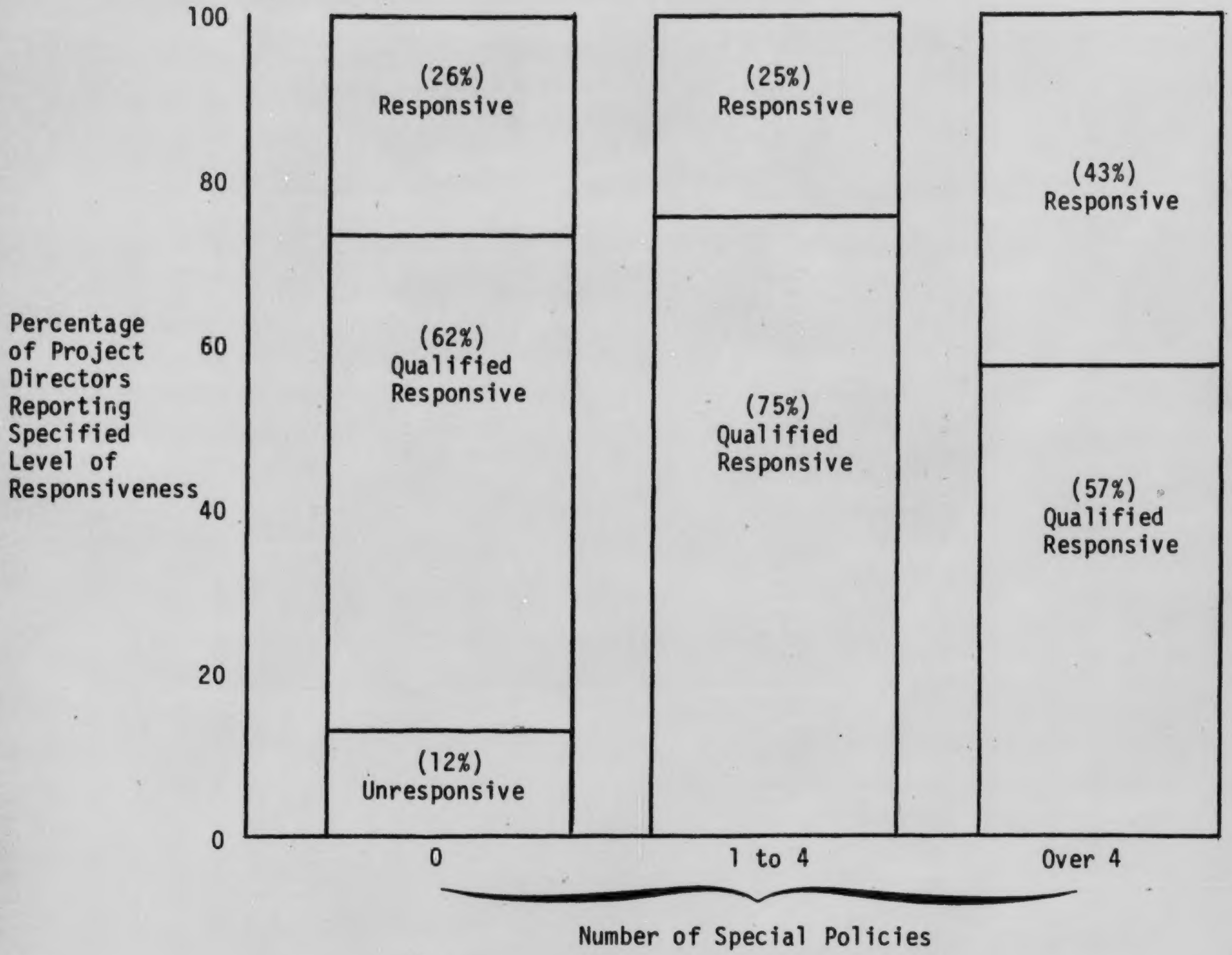
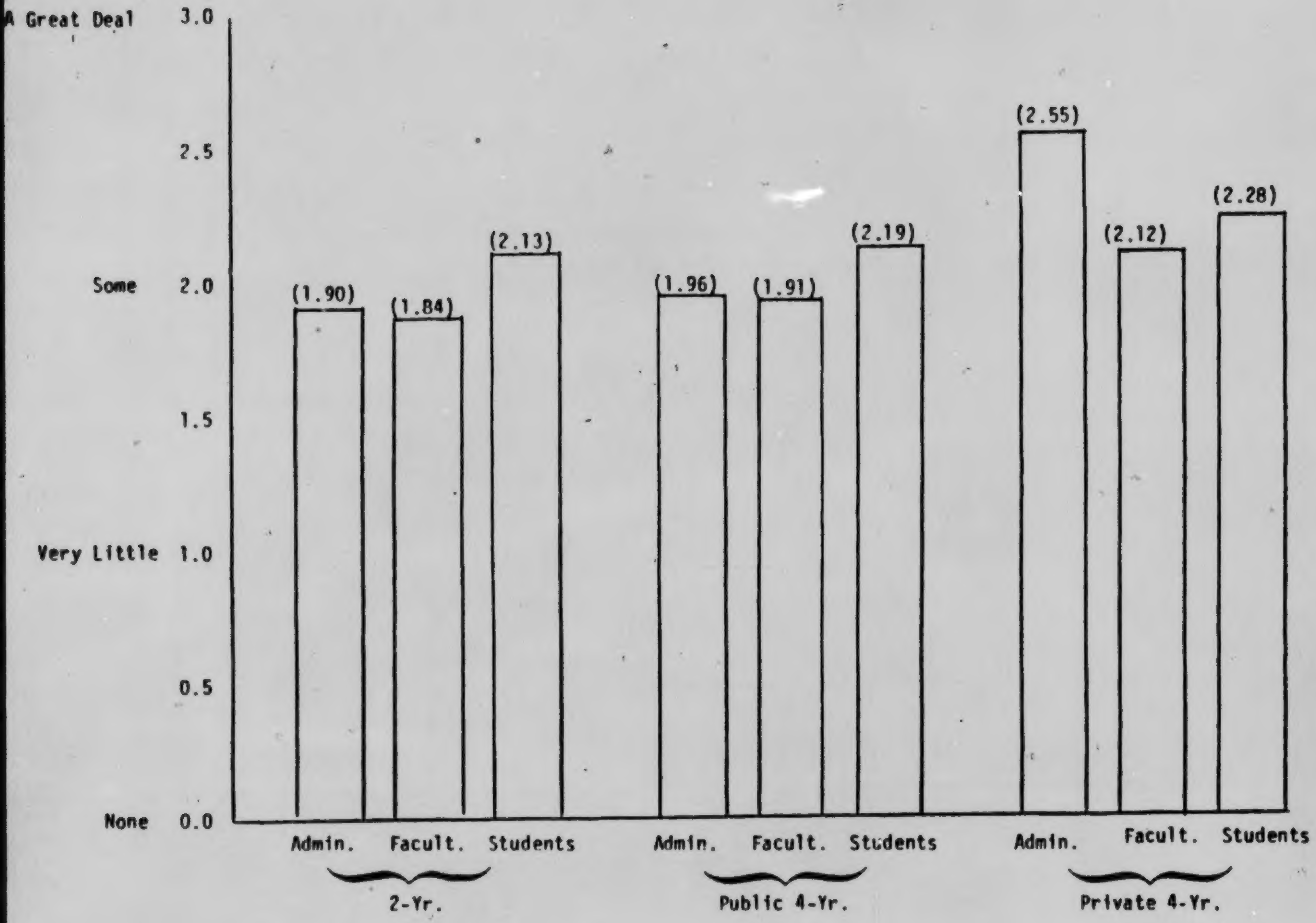


Figure 5-12. Percentages of Projects Directors Reporting Different Levels of Institutional Responsiveness, by Number of Special Institutional Policies for Project Students



* Impact values on the vertical axis represent average values across institutions on a scale from 0.0 (no impact) to 3.0 ("a great deal of impact").

Figure 5-13. Levels of Project Impact* on Institutional Administrations, Faculties, and Student Bodies, as Perceived by Faculty Members in Different Types of Institutions

ranging from 0 (no impact) to 3.0 ("a great deal"). One general trend apparent in the figure is that faculty members in general perceived a substantial amount of project impact on their host institutions. A second is that more overall impact was reported by faculty members in private 4-year colleges and universities than by those in other types of institutions; this may, at least in part, reflect the fact that the private 4-year institutions are smaller than the other types of institutions, and thus any impact of the projects may be more visible to their faculties. Finally, the maximum impact in the private 4-year colleges and universities was felt to be on the institutions' administrations, whereas in other types of institutions it was believed to be on the student bodies.

Institutional administrators were also asked about their perceptions of project impact, specifically on the host institutions' policies and practices regarding student admissions, probation, and retention. These questions, it should be emphasized, were concerned with the institutions' policies for their general student bodies, not with their special policies for SSDS students. The results are shown in Table 5-4 for the three types of institutions. In the case of admissions policies, most respondents indicated that no changes had occurred, and thus there was little to attribute to the SSDS projects; most of the few such attributions made were in the public 4-year colleges and universities. Even in the areas of probation and retention, about half the responding administrators reported no policy changes, and many of the remaining respondents felt that none of the change was attributable to the SSDS projects. However, about a third of the respondents overall did attribute all or part of changes in probation and retention policies to the projects' existence, with the 4-year colleges and universities making more such attributions than the 2-year colleges.

Administrators were asked whether the projects' presence on campus had increased or decreased their administrative problems. Only a fourth reported any increase in problems, while half reported a decrease and the remaining fourth reported no change. (See Appendix 5-8.)

Table 5-4. Percentages of Institutional Administrators Attributing Different Portions of Changes in Admission, Probation, and Retention Policies and Practices to SSDS Projects, by Type of Institution

Portion Attrib. To Projects	Admission Changes			Probation Changes			Retention Changes		
	2-Yr.	Pub. 4-Yr.	Priv. 4-Yr.	2-Yr.	Pub. 4-Yr.	Priv. 4-Yr.	2-Yr.	Pub. 4-Yr.	Priv. 4-Yr.
All Attributed	0	9	0	3	18	0	10	19	12
Part Attributed	0	6	6	6	18	40	14	17	31
Not Attributed	0	7	0	38	21	28	25	13	15
No Changes	100	78	94	53	43	32	51	51	42

In response to questions about project effects on project students, virtually all of the institutional administrators interviewed indicated that they believed the projects had beneficial impact on the participants' academic performance and skills (97 percent), their social/personal skills and self-concept (94 percent), and their adjustment to the campus environment (99 percent). (See Appendix 5-9.)

Finally, the Project Directors were asked to "Describe what you see as the Project's impact . . . on this institution's policies and practices," and the responses were coded into several categories as shown in Figure 5-14. Overall, more than four-fifths of the Directors believed their projects had some positive effect on some aspect of the host institutions, with the highest percentages of respondents perceiving such impact on teaching practices (26 percent) and on probation or retention policies (27 percent). Additional analyses (see Appendix 5-10) indicate that project impact on the institutions (as perceived by the Directors) was greater in institutions where the Project Directors had greater perceived influence on institutional decisions affecting the projects, and also where the Directors had greater administrative rank within the institutions (see Appendix 5-11).

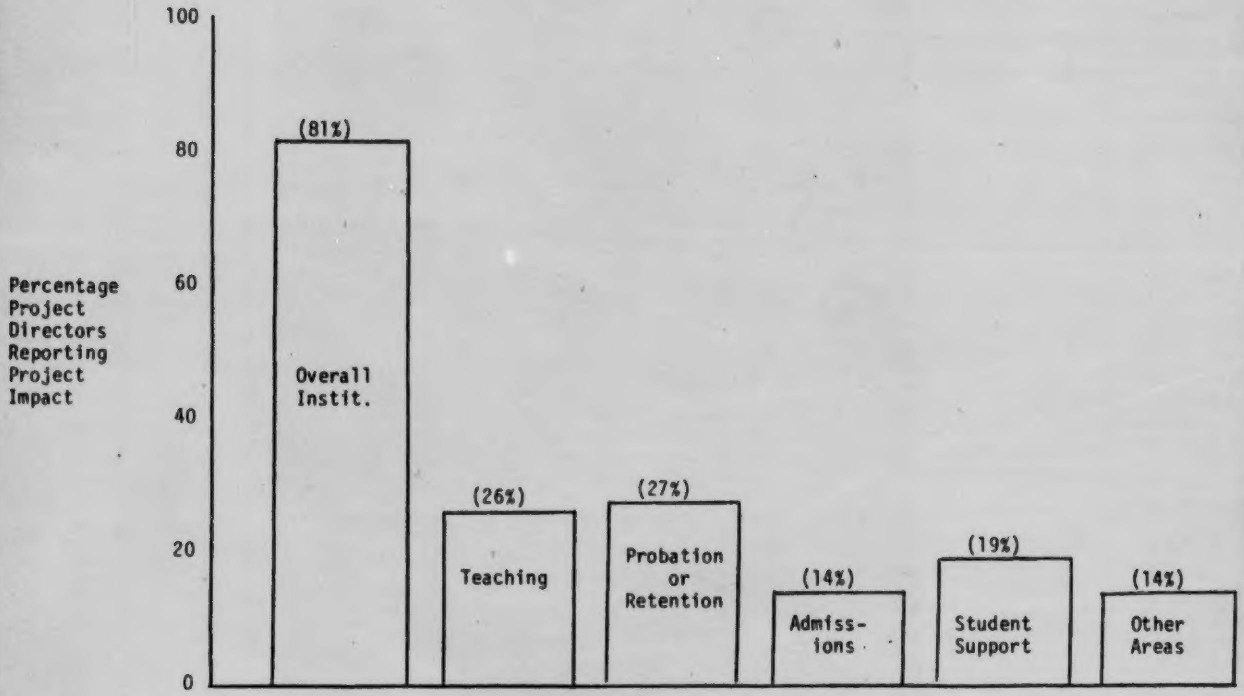


Figure 5-14. Percentages of Project Directors Reporting Project Impact on Different Aspects of Institutions

CHAPTER 6. SERVICES PROVIDED BY PROJECTS

As noted in Chapter 2, Student Participation Records completed by SSDS staff members were used in this study to obtain detailed records of each occasion when a student or group of students received some type of service from a project. The present chapter summarizes the data thus obtained, and examines the relationships between certain aspects of the participation data and other project characteristics such as the projects' funding levels; some of these relationships are examined by non-linear techniques, because of the fact that one or more of the variables involved had skewed rather than normal (bell-shaped) distributions. After a brief overview, the chapter is organized into three general sections: Instruction; Counseling, Referrals and Needs Assessment; and Other Services.

A. Overview of Student Participation Data

Figure 6-1 shows the percentages of SSDS projects having different average numbers of contracts with participating students during the academic year. (A "contact" represents a single incidence of a student receiving a service; a group counseling session involving five students, for example, would constitute five contacts.) Each bar in the figure represents a range of contact values; for instance, the left-most bar indicates that in 12 percent of the projects, the average participating student had between 0 and 5 contacts with the project. It can be seen that, in about two-thirds of the projects, a typical student had between 0 and 15 contacts, but in smaller percentages of the projects an average student might receive up to 55 contacts. The overall mean number of contacts per participating student was almost 14.

The percentages of projects providing different average levels of total service time per participating student are shown in Figure 6-2. (Total service time refers here to the total amount of time a student is actually participating in instruction, counseling, referrals, needs assessment, and other services. It does not include any project staff spent in preparing for such services.) The overall mean participation time across projects was 14 hours. As Figure 6-2 indicates, the modal range of values was from 5 to 10 hours, and almost

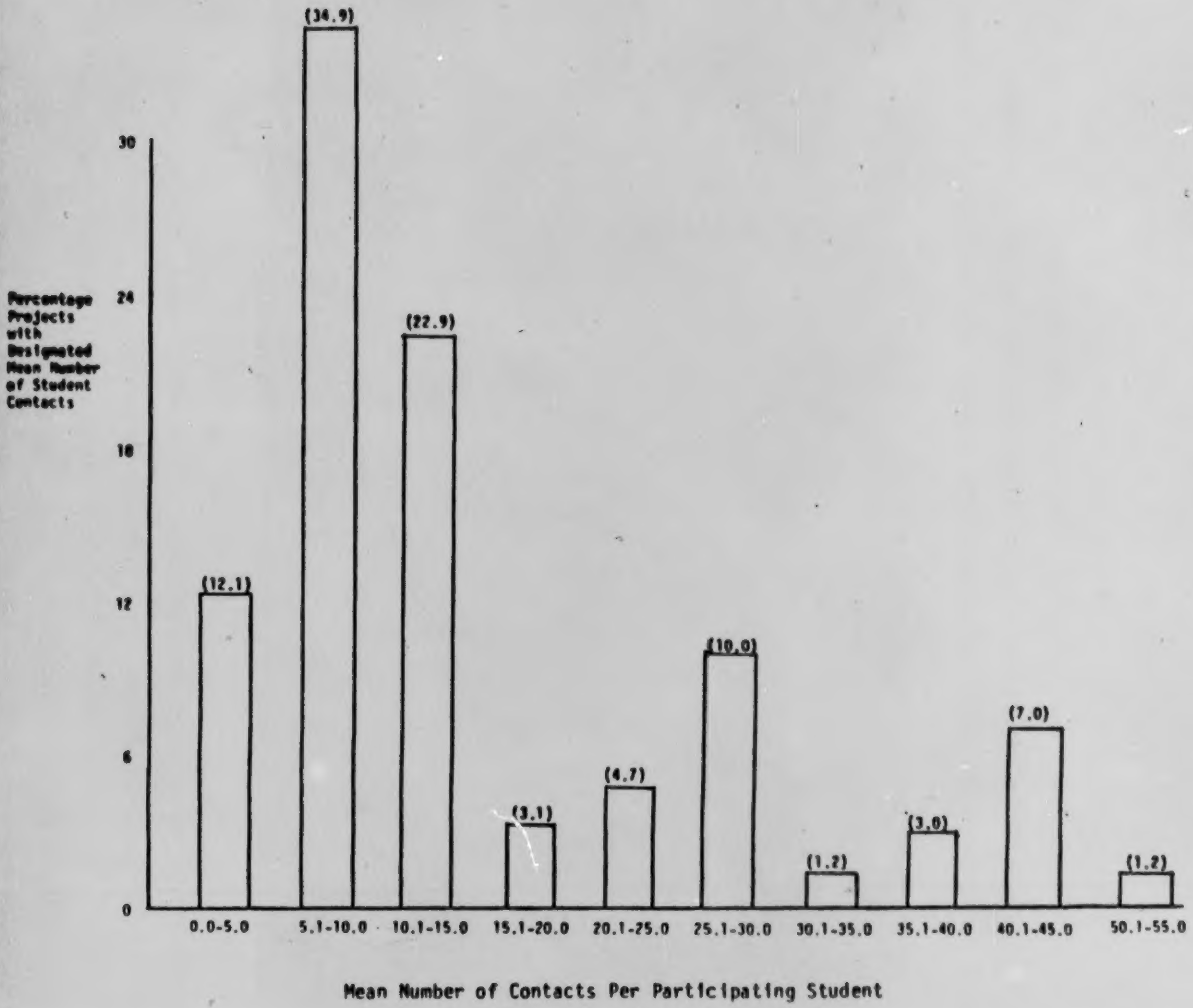


Figure 6-1. Percentages of Projects With Different Average Numbers of Contacts Per Participating Student

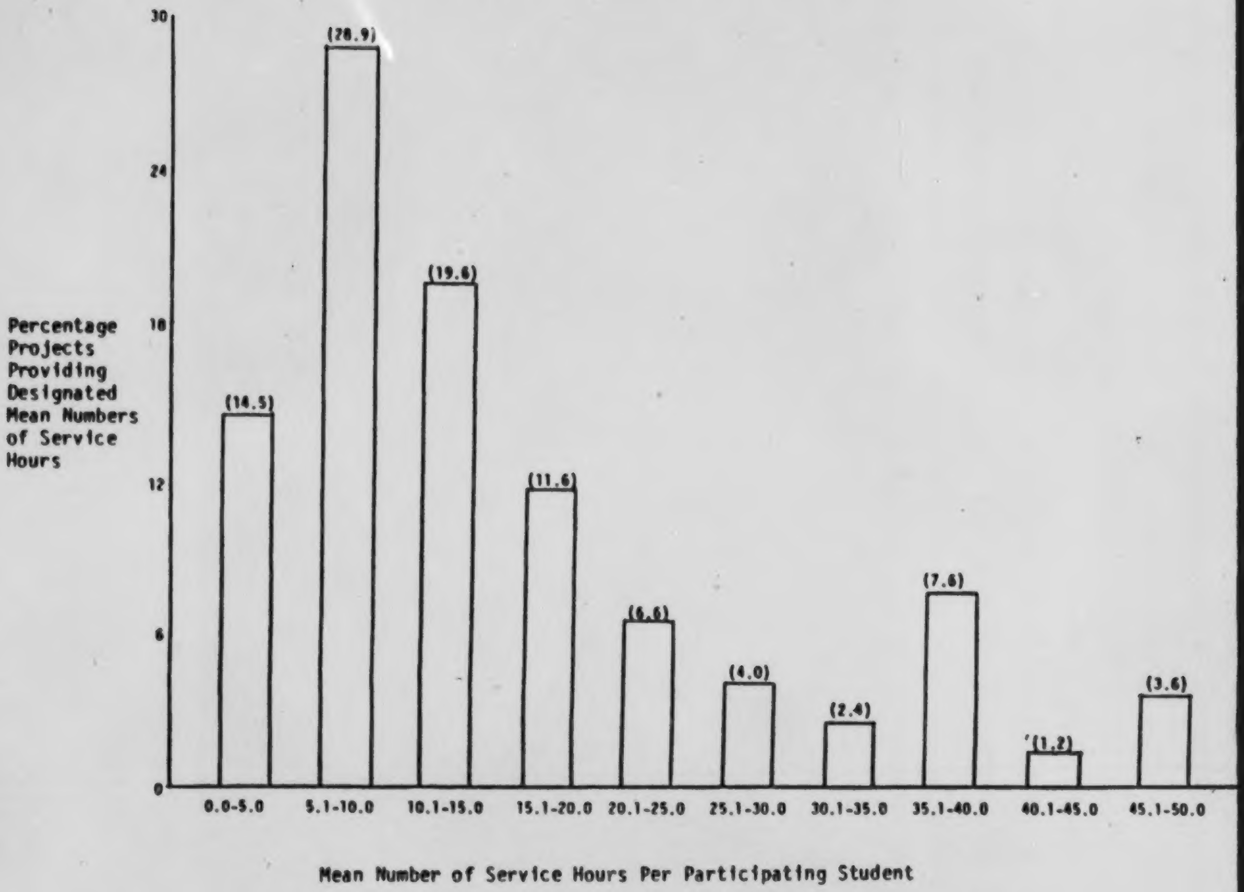


Figure 6-2. Percentages of Projects Giving Different Average Numbers of Service Hours Per Participating Student

two-thirds of the projects had mean values between 0 and 15 hours. However, a few provided average participation values up to 50 hours.

Ratios of participating students to project staff varied widely across projects. The average ratio across all projects was 17.6 to 1, but as shown in Figure 6-3, about two-thirds of the projects had ratios ranging from 2 to 1, to 15 to 1, and a fourth of the projects had over 20 participating students per staff member. It should be noted that the staff figures used in calculating these ratios include part-time and student staff members; much higher ratios would have resulted in many projects had only the core full-time staffs been considered.

How many participating students a project had was to some extent a function of the project's total funding level and also of the type of host institution. Not surprisingly, projects with larger numbers of students tended to be more affluent. As Figure 6-4 indicates, for example, only about 30 percent of projects with budgets below $100,000 had over 300 participating students, whereas 90 percent of projects budgeted at over $150,000 had that number of students. Projects in private 4-year colleges and universities had considerably smaller numbers of participating students than those in other types of institutions (see Figure 6-5); this is in keeping with the fact that they also tend to have smaller total enrollments.

Funding level was related not only to the projects' numbers of participating students but also to the total hours of service provided by projects to all participating students. This latter relationship, depicted in Figure 6-6, indicates a general trend for more liberally funded projects to provide more total participation hours. There is considerable spread in participation hours at all levels of funding, however.

Figure 6-7 shows a scatterplot relating the projects' average cost per student hour of service provided (across all types of services) to the average number of service hours provided to each participant. (Two outliers--projects with extremely high reported cost/hour figures--were deleted from the plot.) There appears to be a curvilinear relationship, with cost/hour generally decreasing

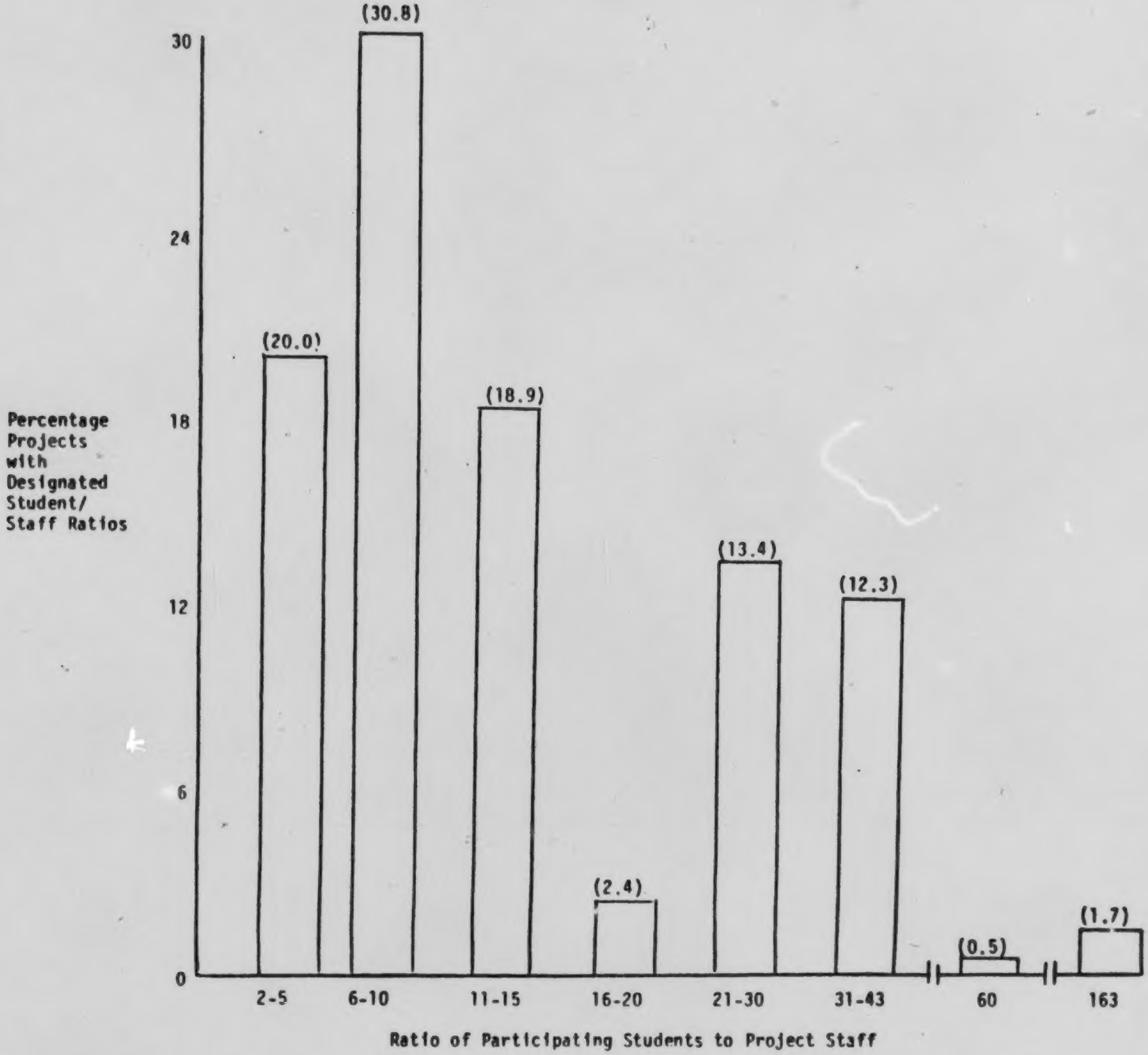


Figure 6-3. Percentages of Projects Having Different Student/Staff Ratios

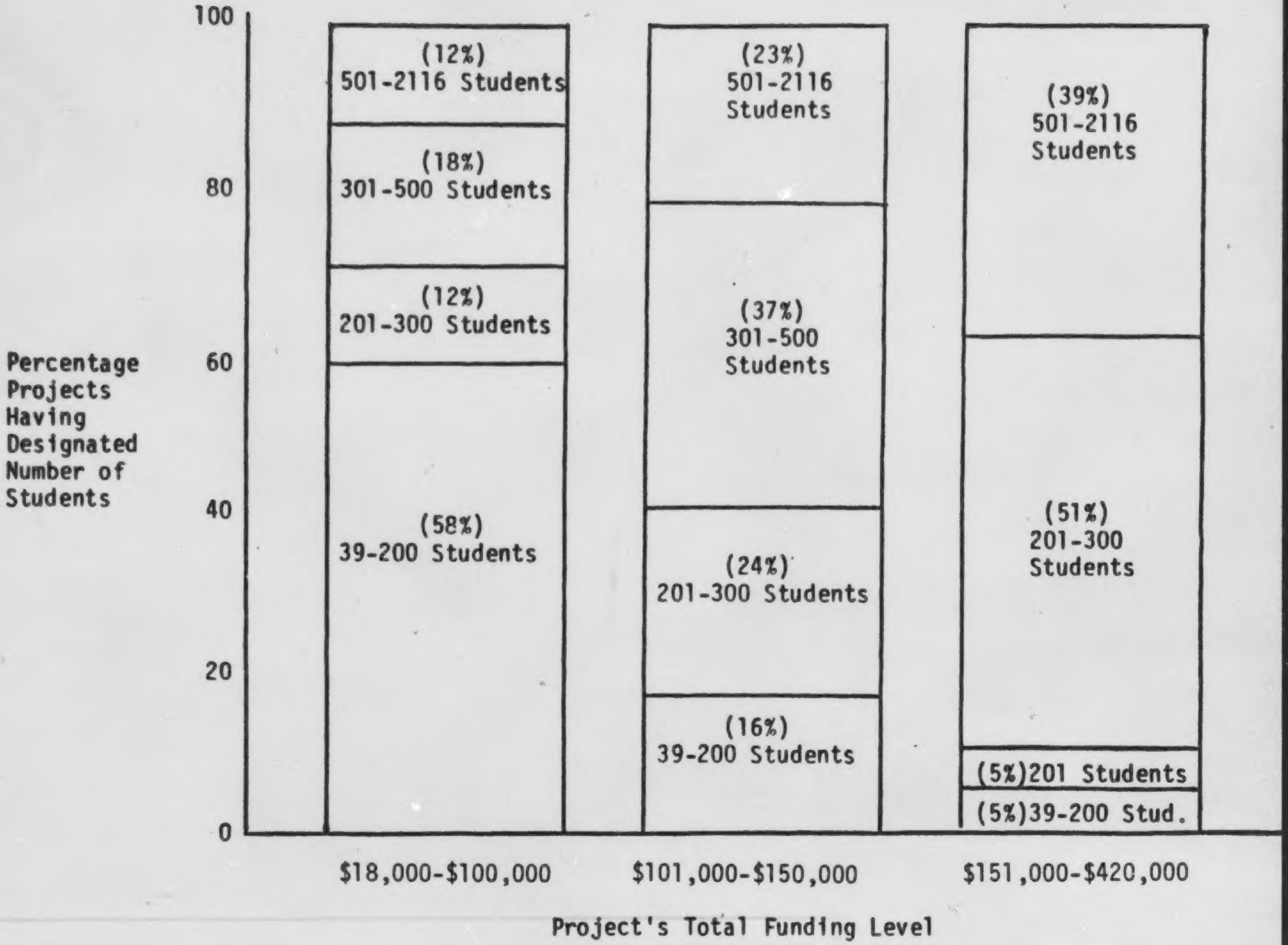


Figure 6-4. Percentages of Projects of Different Funding Levels Having Different Numbers of Participating Students.

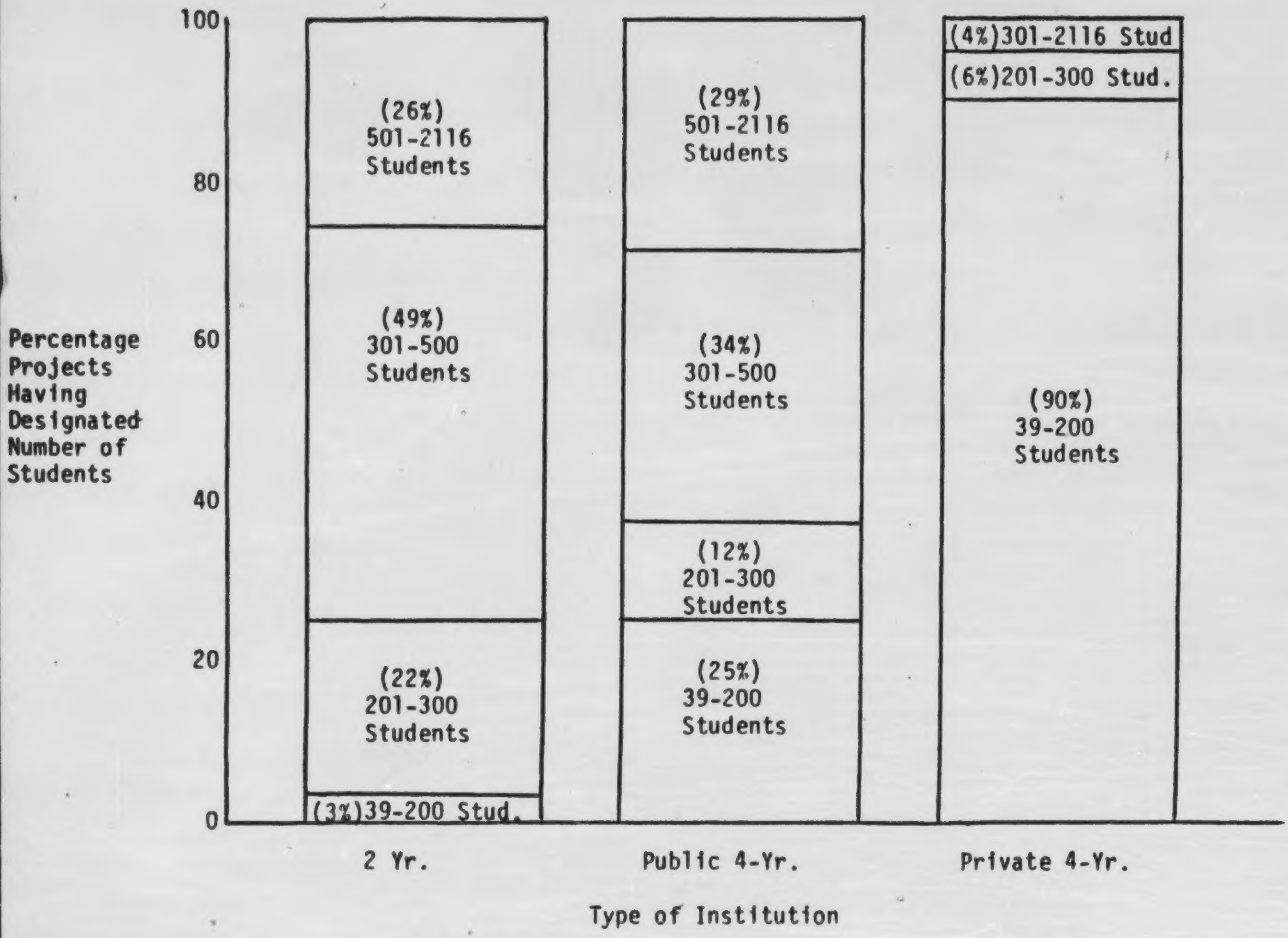


Figure 6-5. Percentages of Projects Having Different Numbers of Participating Students, by Type of Institution

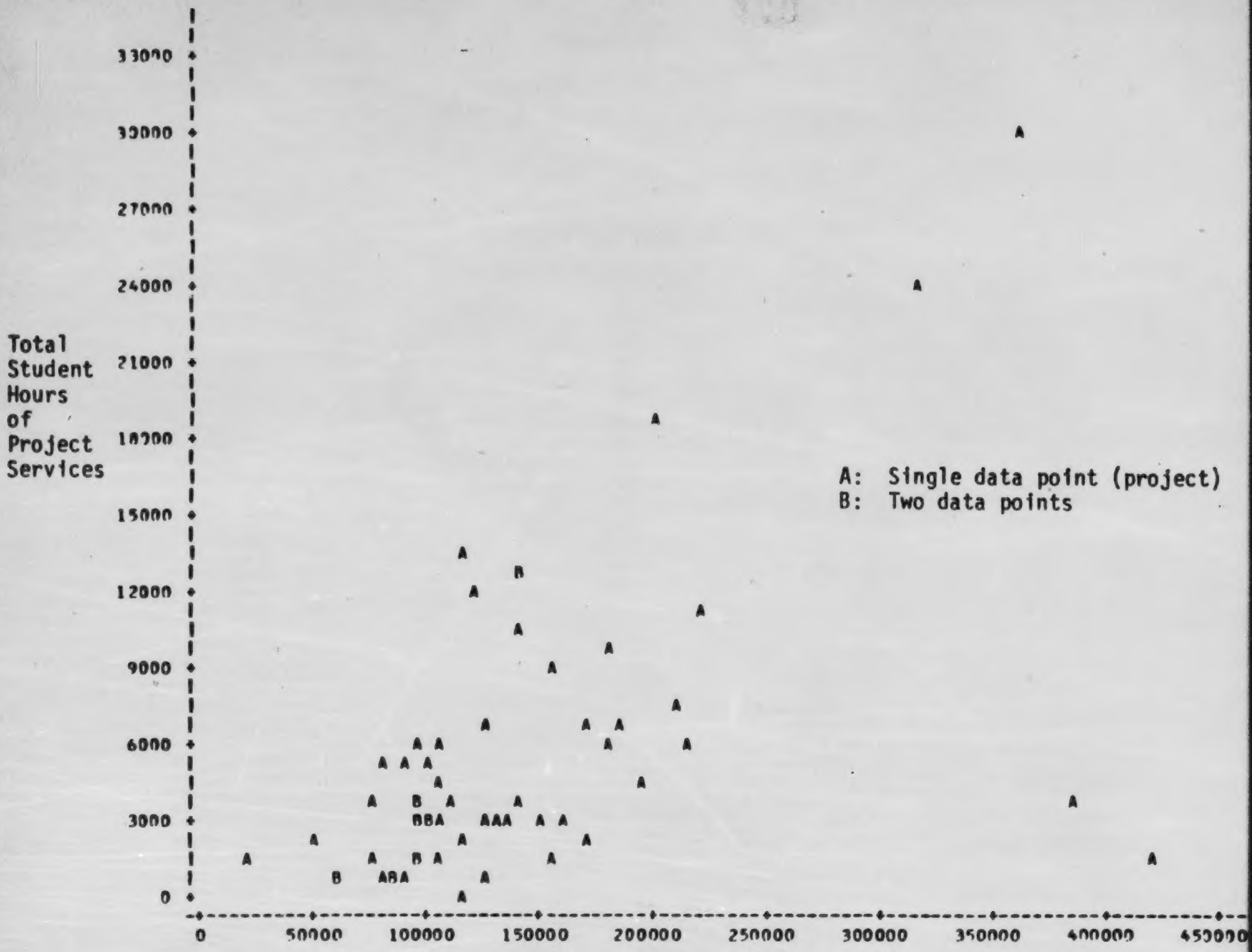


Figure 6-6. Total Student Hours of Service for Projects With Different Funding Levels

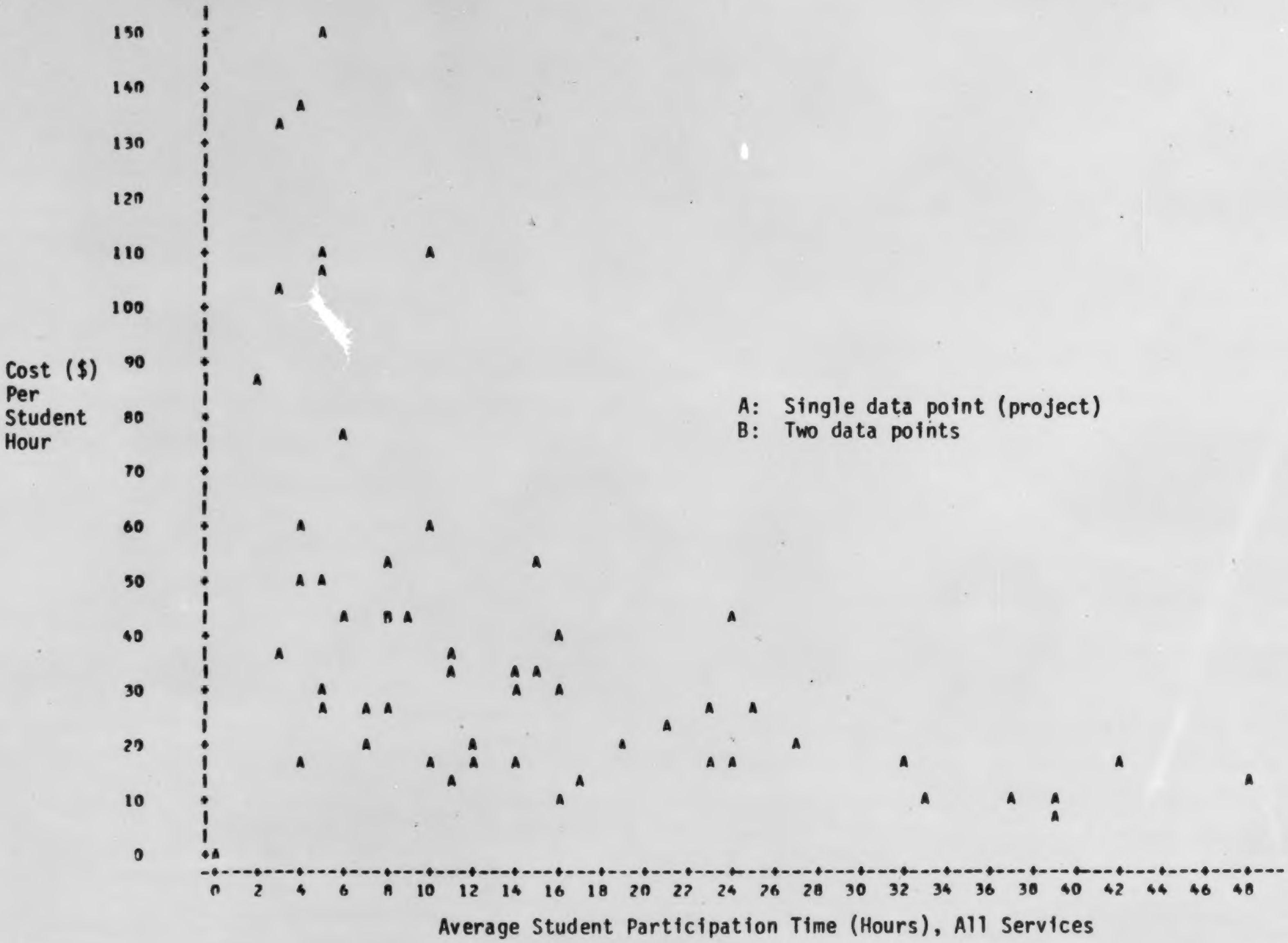


Figure 6-7. Project Cost Per Hour of Student Participation, for Different Average (Per-Student) Lengths of Participation Time

as the per-participant service hours increase, thus indicating an efficiency of scale for larger project efforts. The relationship is somewhat obscured, however, by a very large spread in cost/hour at the lowest levels of service hours.

Regression analysis failed to yield any significant relationships between the per-hour costs of services and the per-student hours of service delivery in the basic service components (tutoring, group instruction, counseling, etc.). However, non-linear regression analysis revealed a significant relationship (quadratic term) between per-hour costs of services and the per-student total hours of service; this finding confirms the curvilinear relationship between those two variables displayed in Figure 6-7.

In general, projects with more staff members provided more total hours of services to participating students. For example, the scatterplot in Figure 6-8 indicates a positive overall relationship between the numbers of full-time-equivalent (FTE) tutors employed by projects and the total numbers of tutoring hours provided to participating students; the correlation between those variables was significant. Significant correlations were also found between the number of FTE classroom instructors and the total hours of group instruction (see scatterplot in Figure 6-9); between the number of FTE project counselors and the total number of counseling hours (Figure 6-10); and between the number of FTE administrative staff members and the projects' total hours of service delivery (Figure 6-11). It should be noted, however, that in all these relationships there was considerable spread in service hours for any given staffing level, and that the strength of the correlation in some of these analyses is due in large measure to a relatively small number of cases with exceptionally high values on both staffing level and service hours.

B. Instructional Services

Table 6-1 gives an overview of the instructional services provided by the SSDS projects. As with all other data presented in this chapter, the service hours displayed here do not include any preparation time spent by staff members. The left-most column in the table (following the "Activity" designation) indicates

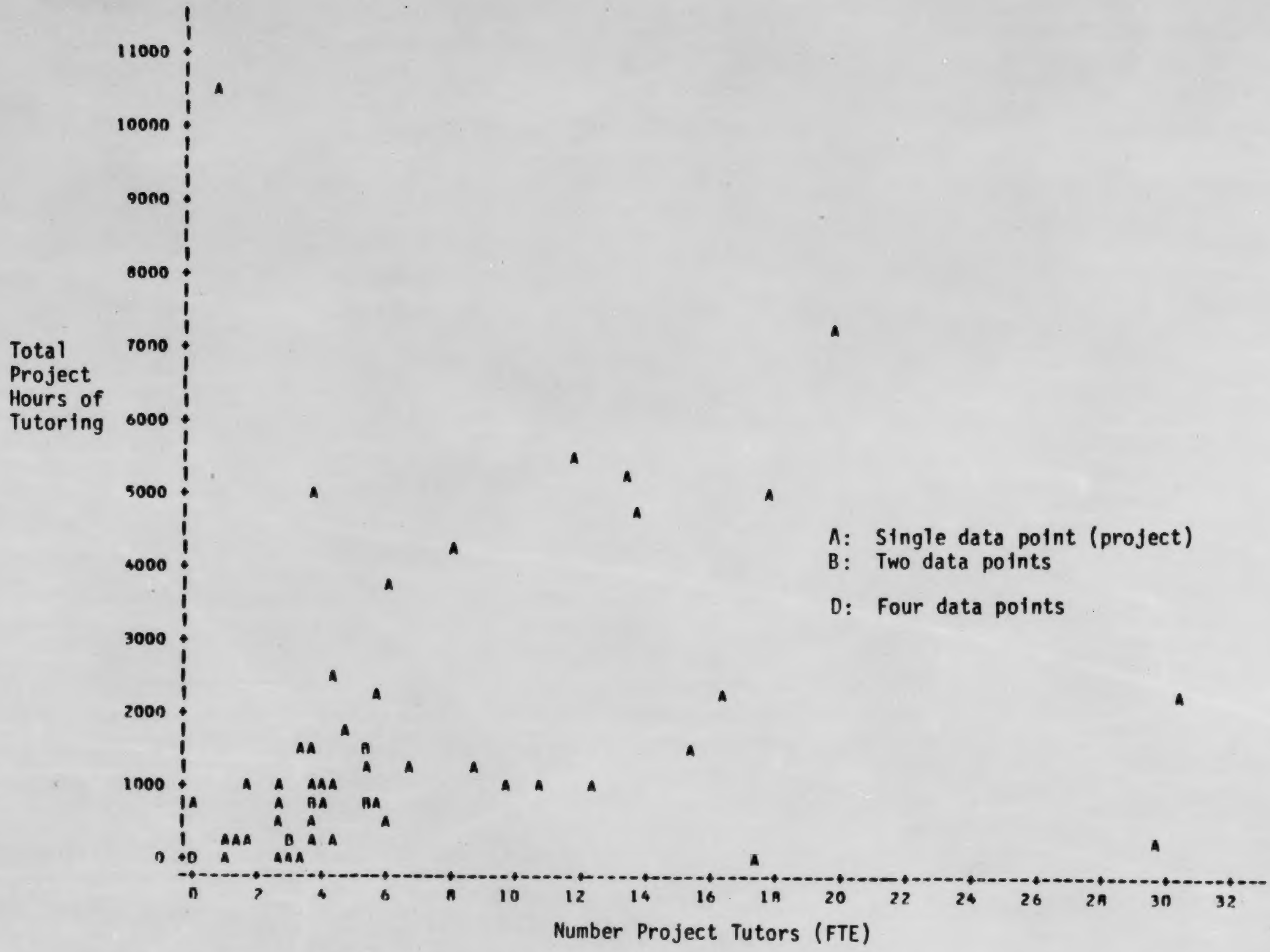


Figure 6-8. Total Hours of Tutoring for Projects With Different Numbers of Tutors (Full Time Equivalent)

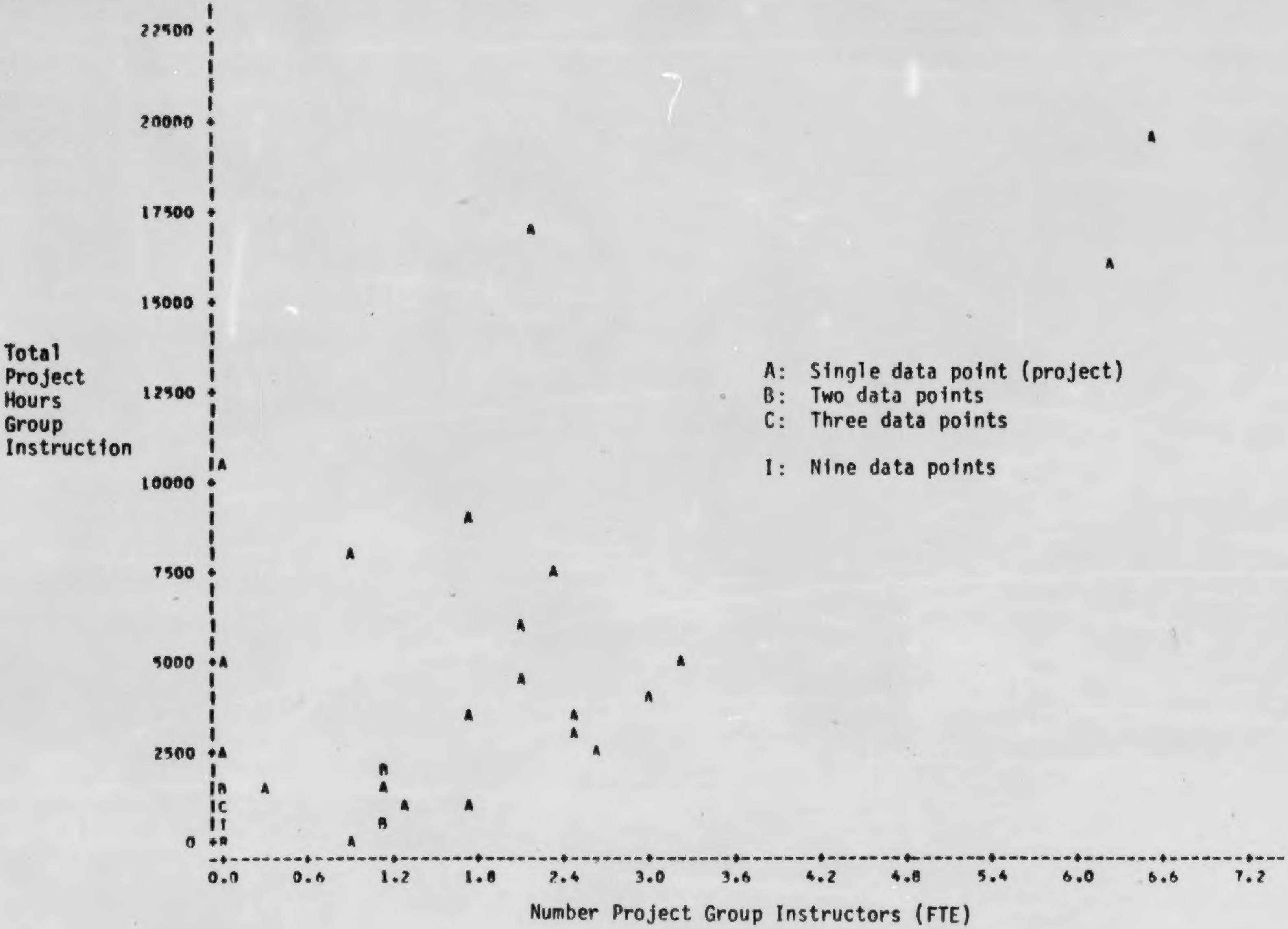


Figure 6-9. Total Hours Group Instruction for Projects With Different Numbers of Group Instructors (Full Time Equivalent)

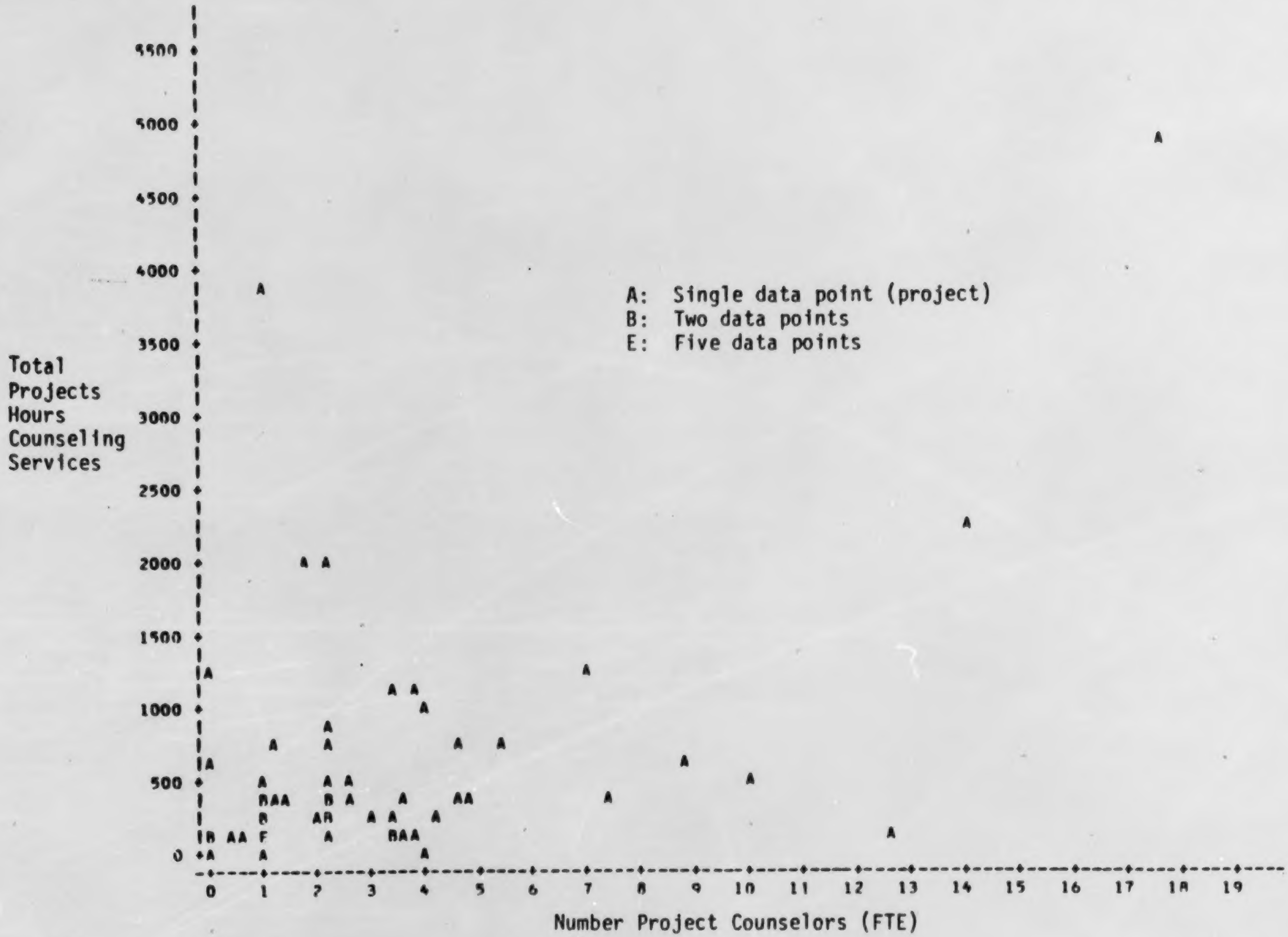


Figure 6-10. Total Hours Counseling for Projects With Different Numbers of Counselors (Full Time Equivalent)

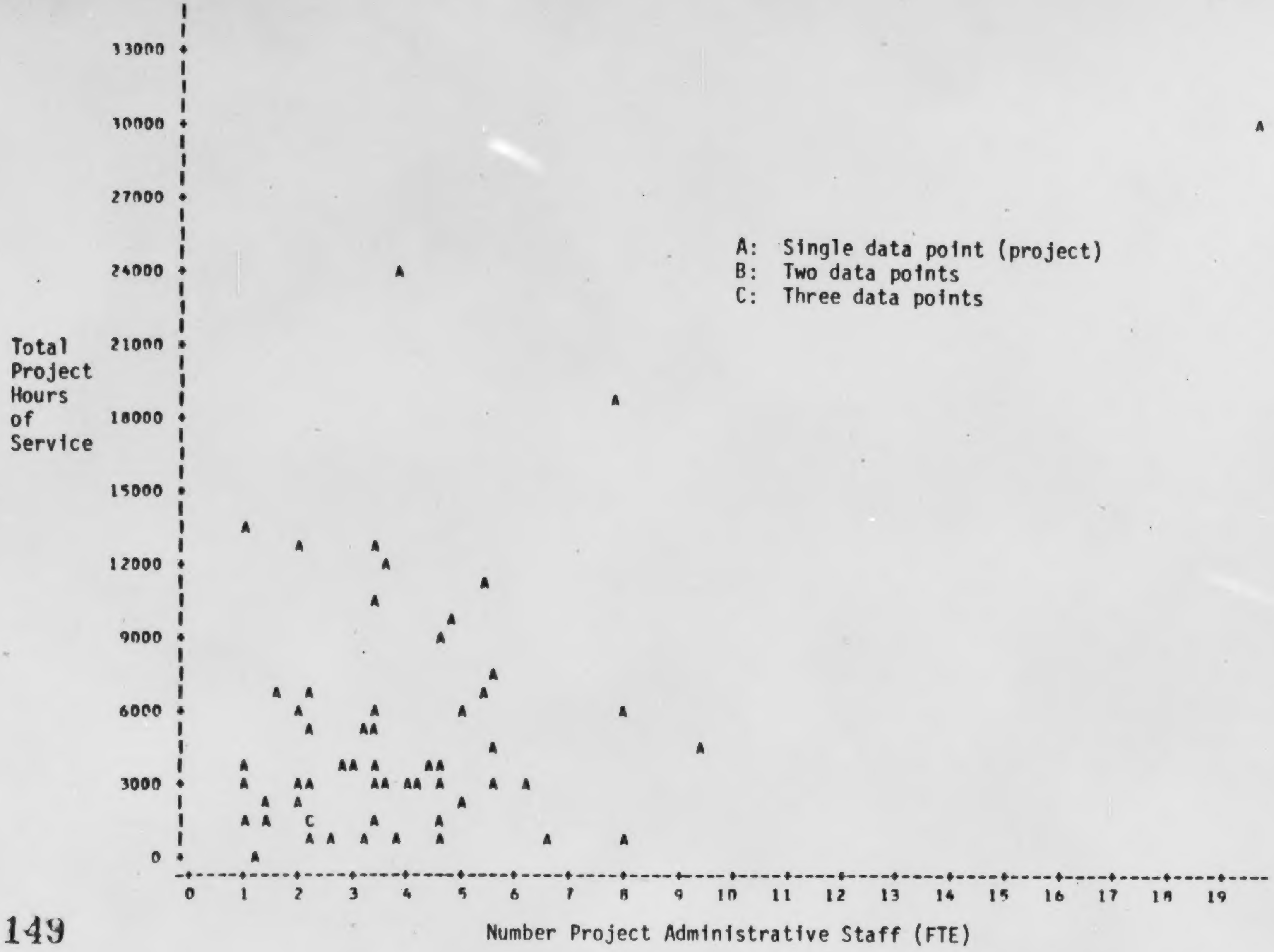


Figure 6-11. Total Hours of Service for Projects With Different Numbers of Administrative Personnel (Full Time Equivalent)

the percentage of projects offering that particular type of service, and the next column shows the percentage of students in schools offering the service who participated in that service. Following this are the mean and median numbers of hours of service received by each student participating in that type of service. The final two columns specify the mean and median numbers of project staff members assigned to the activity area.

Table 6-1. Overview of Instructional Services Received and Staff Members Providing Services

Activity	Percentage Projects Offering	Percent. Students Receiving		Per-Student Hours Received		Staff Assigned	
		Mean	Median	Mean	Median	Mean	Median
Tutoring	95.5	51.3	50.2	9.1	6.0	22.2	14.0
Group Instruct.	88.3	31.3	26.9	19.8	11.0	1.9	0.2

It can be seen from Table 6-1 that most projects offered both group instruction and tutoring. About half the project students receiving tutoring, but considerably fewer participated in group (classroom) instruction. Among those students who received tutoring, the average (mean) tutoring time was 9 hours; among students receiving group instruction, the average group instruction time was almost 20 hours. The large difference between the mean and median for the latter type of instruction indicates a strongly skewed distribution in group instruction time, with a few students receiving very large numbers of hours of such instruction. In interpreting the large number of staff members providing tutorial services, it should be kept in mind that most of the tutors were students who were employed only small percentages of their time by the projects.

Figures 6-12 through 6-17, below, show in greater detail the distributions of the SSDS projects with respect to the provision of tutorial and group instruction. Figure 6-12 indicates the distribution of projects with regard to their percentages of total effort (service hours) devoted to tutorial instruction.

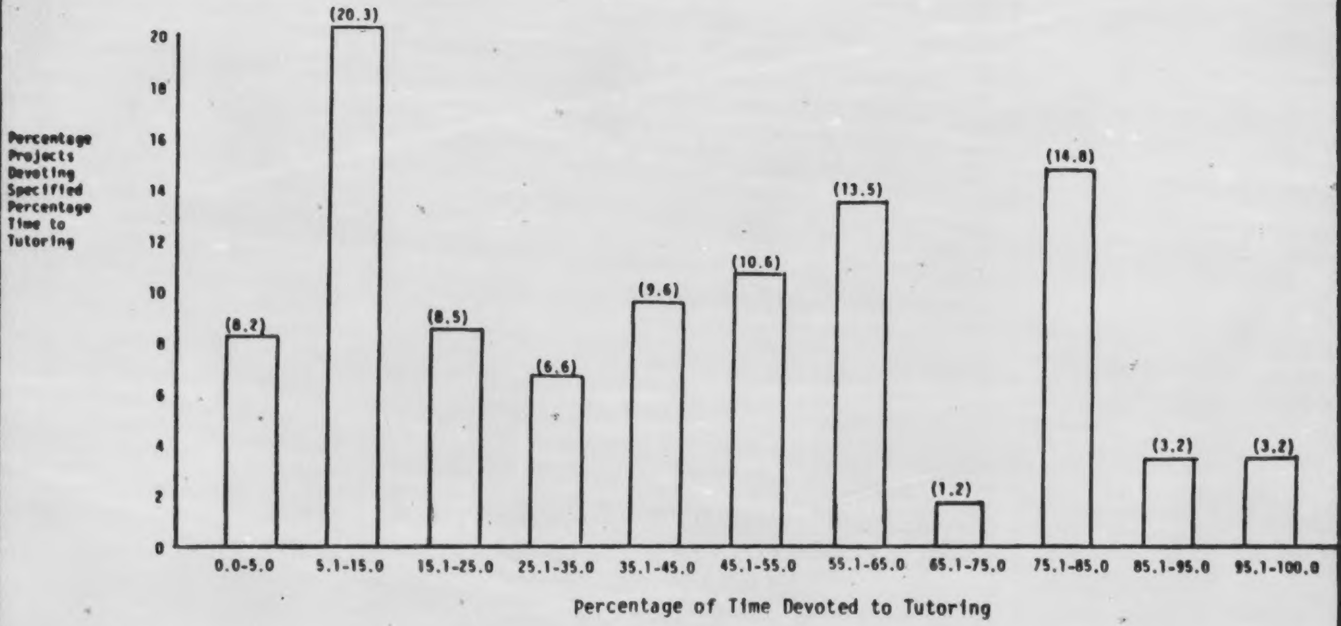


Figure 6-12. Percentages of Projects Devoting Different Percentages of Total Service Time to Tutoring

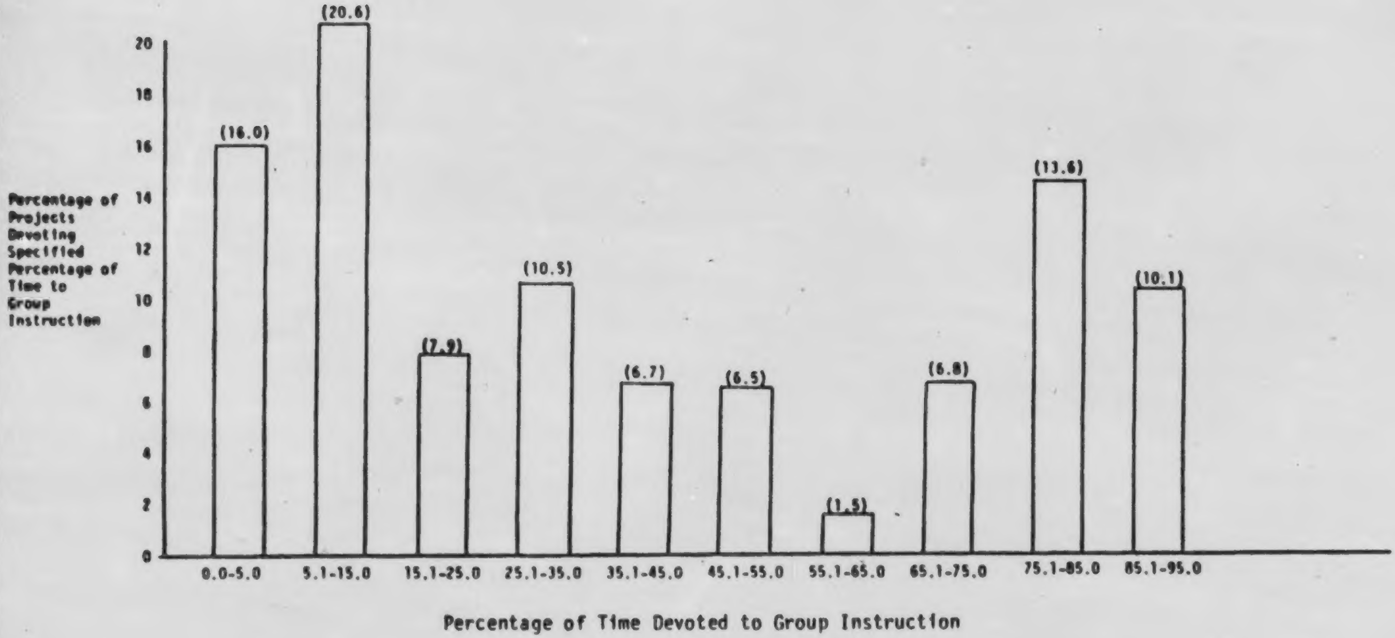


Figure 6-13. Percentages of Projects Devoting Different Percentages of Total Service Time to Group Instruction

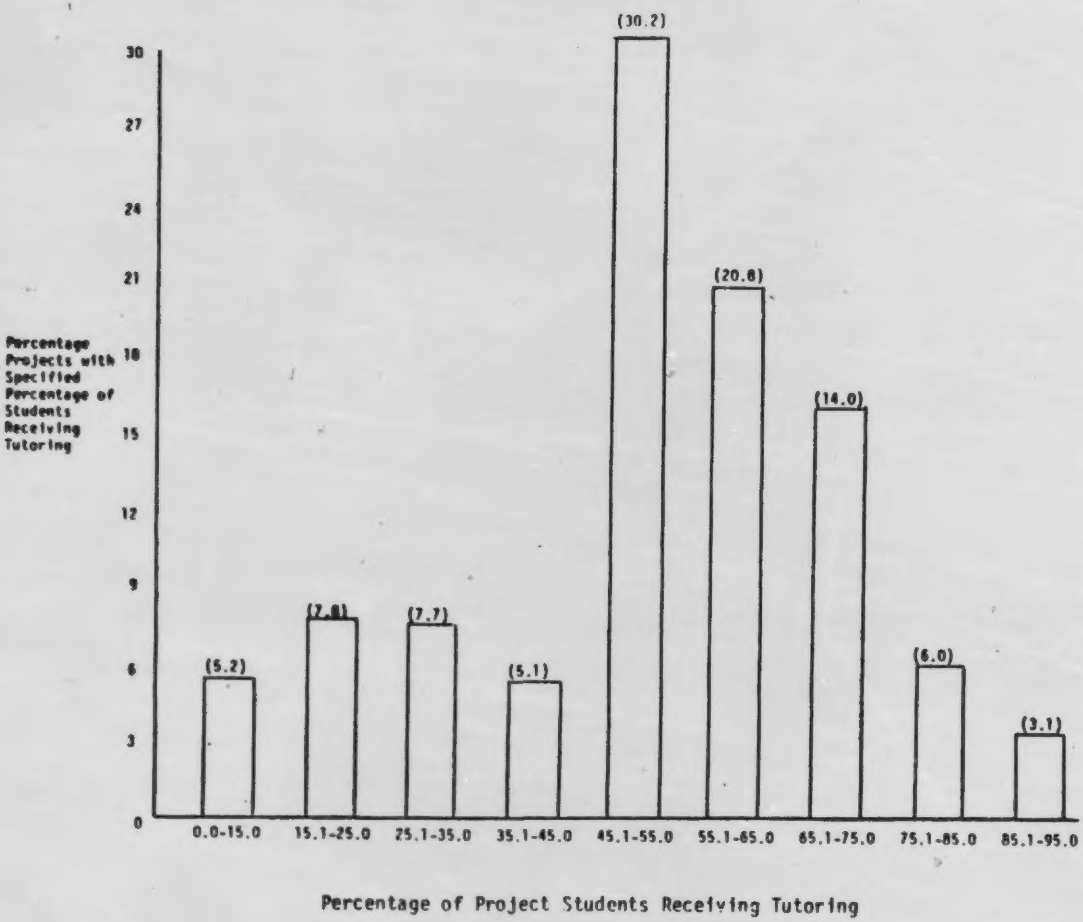


Figure 6-14. Percentages of Projects With Different Percentages of Participating Students Receiving Tutoring

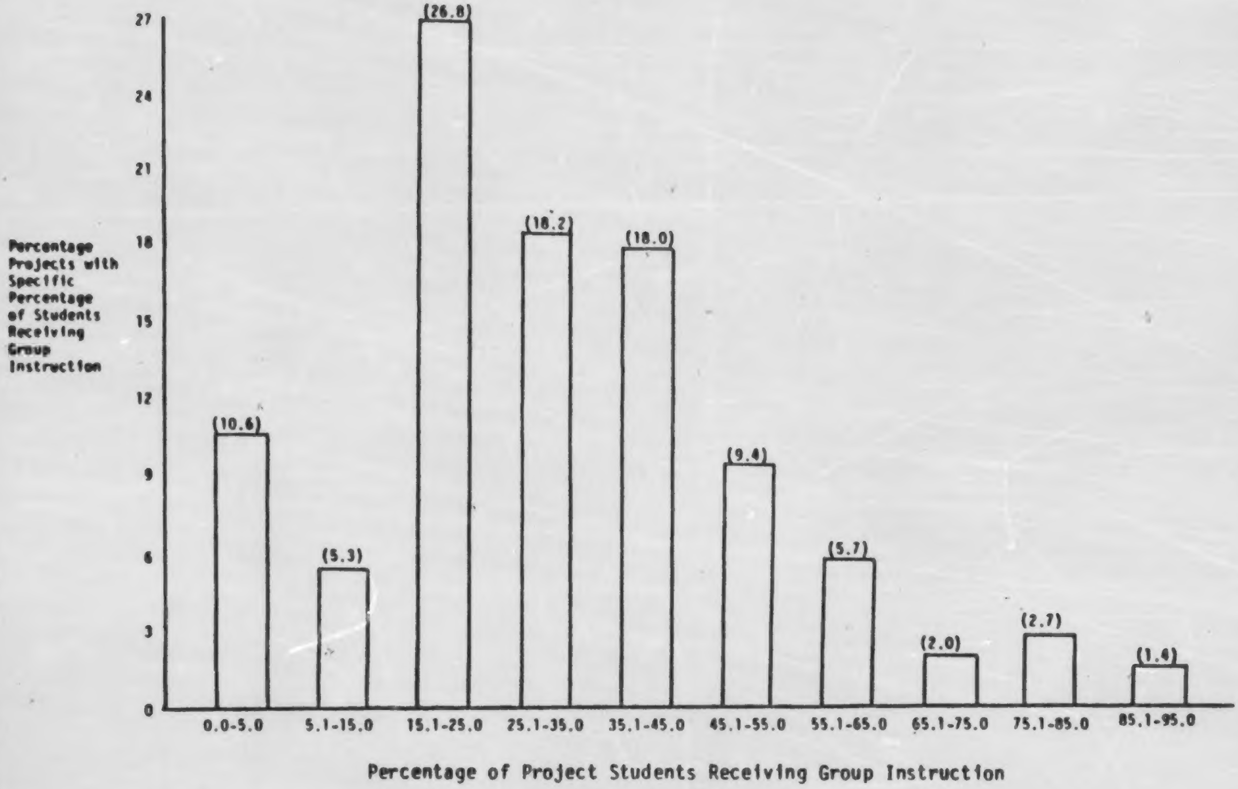


Figure 6-15. Percentages of Projects With Different Percentages of Participating Students Receiving Group Instructions

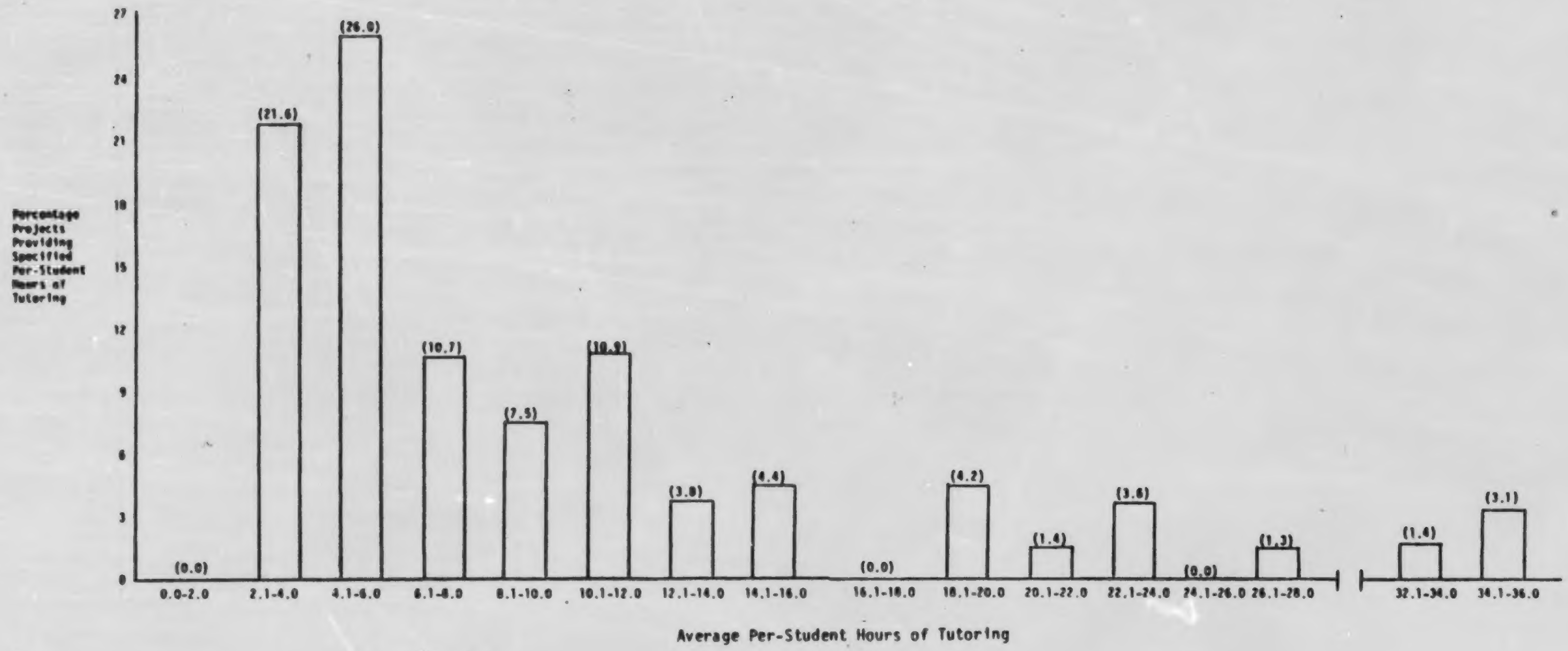


Figure 6-16. Percentages of Projects Providing Different Average Numbers of Hours of Tutoring to Participating Students

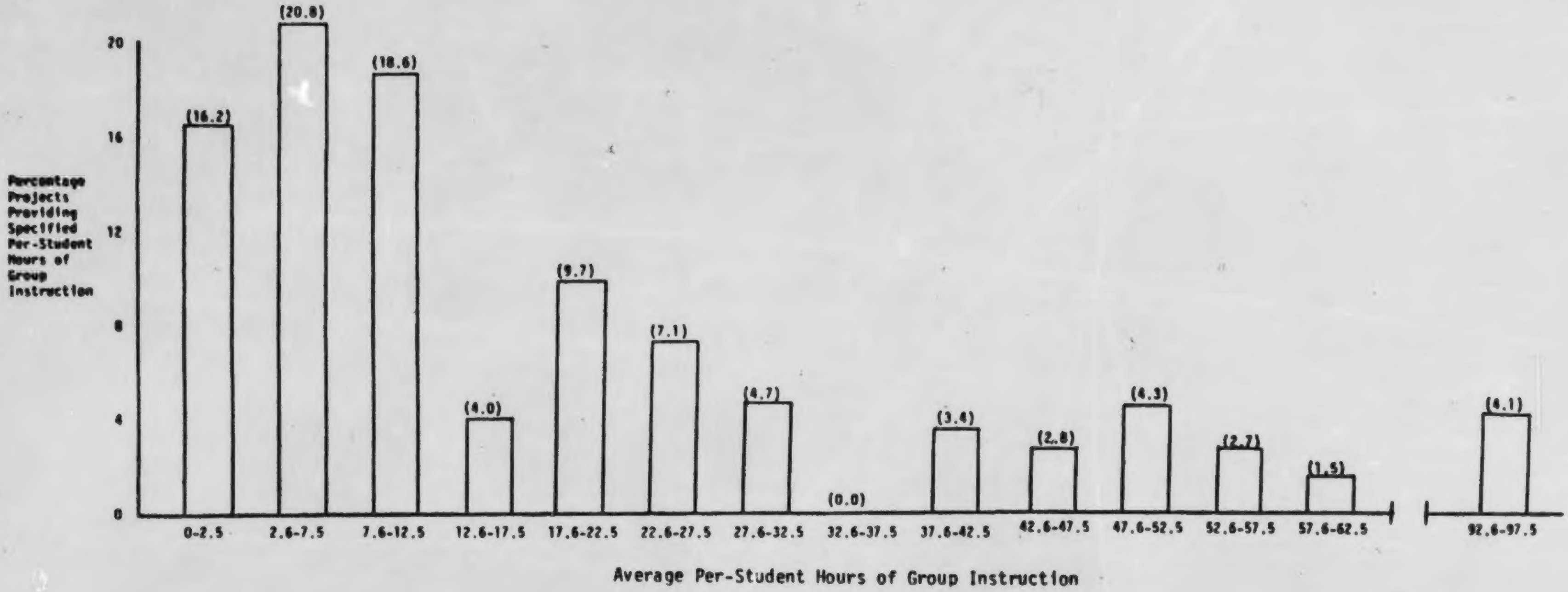


Figure 6-17. Percentages of Projects Providing Different Average Numbers of Hours of Group Instruction to Participating Students

For example, the left-most bar indicates that 8.2 percent of the projects committed between 0 and 5 percent of their total service effort to tutoring. It can be seen that the most common commitment was in the range from 5.1 to 15 percent; the overall distribution of commitment levels is more rectangular than normal (bell-shaped) in form, with substantial portions of the cases evident up to 95 percent of the project service time.

Comparable data for group instructional services are shown in Figure 6-13. Here again the most common levels of time commitment are at the low end of the distribution (0 to 15 percent), but the distribution continues fairly strongly out to 95 percent of project service time committed to group instruction.

Figures 6-14 and 6-15 indicate, for projects offering tutoring instruction (Figure 6-14) and/or group instruction (Figure 6-15) the percentages of those projects actually providing such services to different percentages of project students. The distribution in Figure 6-14 is considerably closer to normal shape than the two preceding bar-charts, and indicates that the maximum number of projects (30.2 percent) provided tutoring services to between 45.1 percent and 55 percent of project students. Figure 6-15, by comparison, shows a skewed distribution for group instruction, with its peak at the range between 11.1 and 20 percent of participating students, and then tapering off slowly with higher percentages of participating students.

Another aspect of the distribution of tutorial and group instructional services is represented in Figures 6-16 and 6-17, respectively, which show the percentages of projects giving different average numbers of hours of instruction to participating students. The two distributions are similar in general shape, with most of the projects concentrated in the region of low service hours (0 to 5 hours for tutoring, and 0 to 12.5 hours for group instruction), and then with percentages of projects tapering off at higher numbers of hours.

Additional detail regarding the projects' instructional services may be seen in Tables 6-2 and 6-3, which break down the tutorial and group instruction into specific content areas. Table 6-2 indicates that most projects offered tutoring in each of the content categories represented, but that English and mathematics were the only subjects in which any substantial percentages of project students were tutored. Among students who were tutored, the average (mean) tutoring time ranged from a little under 4 hours in social science to more than 7 hours in mathematics.

Table 6-2. Services Offered and Hours Received in Different Instructional Content Areas: Tutoring

Content Area	Percentage Projects Offering	Percent. Students Receiving		Per-Student Hours Received	
		Mean	Median	Mean	Median
English	90.7	21.2	17.1	6.7	4.2
Mathematics	90.3	25.3	24.4	7.2	5.0
Science/ Engineering	80.8	8.5	6.0	5.5	3.8
Humanities	61.9	4.1	1.5	4.1	2.0
Social Science	68.2	5.0	2.7	3.9	2.6
Other	89.4	12.3	8.3	6.1	4.0

Somewhat smaller percentages of projects offered the different types of group instruction, as shown in Table 6-3. English, mathematics, and science/engineering were the most common subjects, with humanities and social science courses provided by substantially fewer projects. Within the relatively few projects offering group instruction, only small percentages of the students received such instruction; English and mathematics were again the most common subjects. Among students receiving group instruction, the average number of hours received ranged from just over 6 (humanities) to 19 (English). Again, the sizable differences between the means and medians for some of these figures indicate skewed distributions; in this case the mean is generally larger than the median, indicating small numbers of students receiving fairly large amounts of group instruction.

Table 6-3. Services Offered and Hours Received in Different Instructional Content Areas: Group Instruction

Content Area	Percentage Projects Offering	Percent. Students Receiving		Per-Student Hours Received	
		Mean	Median	Mean	Median
English	60.9	17.5	9.5	19.1	13.0
Mathematics	61.6	13.9	10.0	13.7	6.3
Science/ Engineering	40.8	5.6	3.7	9.5	4.1
Humanities	19.7	6.5	1.4	6.3	2.3
Social Science	20.0	6.5	4.1	8.9	3.2
Other	76.0	14.3	7.2	8.6	5.2

C. Counseling, Referrals, and Needs Assessment

Counseling, defined here as including also the related activities of needs assessment and referrals of students to other service agencies, was a major SSDS activity, at least as indicated in Table 6-4 by the fact that almost all projects offered one or more types of counseling. Furthermore, over two-thirds of the students in projects offering counseling services received some type of counseling, with by far the greatest emphasis in terms of percentages of participating students being on academic counseling. However, the actual numbers of counseling hours provided to a typical participating student were quite small, ranging on the average from just over one hour (career counseling) to two hours (academic counseling). As noted earlier, the mean and median figures for "Per-Student Hours Received" are based on only those students receiving a particular type of counseling. Furthermore, because there is some overlap among the subsets of students receiving different types of counseling, the per-hour figures for those different types do not total to the figures for "All Counseling."

Table 6-4. Services Offered and Hours Received in Different Types of Counseling

Type of Counseling	Percentage Projects Offering	Percent. Students Receiving		Per-Student Hours Received	
		Mean	Median	Mean	Median
Academic	98.8	52.7	59.3	2.0	1.3
Career	95.2	16.6	13.3	1.2	1.0
Personal	95.8	24.4	20.7	1.6	1.1
Financial	91.8	13.1	8.8	1.3	1.0
Other	100.	53.1	54.4	2.1	1.3
All Counseling	100.	67.0	69.0	2.6	1.8

D. Orientation and Cultural Services

As defined in this report, "Orientation" refers to project activities undertaken to get entering students familiar with certain aspects of the campus, of college/university requirements and resources, and/or of project requirements and resources. "Cultural Services" include project efforts to expand students' awareness of their own or other cultures, using such techniques as guest speakers, films, inter-cultural projects, etc. The overall pattern shown in Table 6-5 is that roughly three-fifths to four-fifths of the projects offered orientation and/or cultural services, and a fourth to a third of the students in those projects received such services. The mean amount of orientation time received by a participating student was about one and a half hours; this probably consisted in most cases of a single introductory session with one or more project staff members. A larger average per-student time was devoted to orientation services (four and a half hours), but this figure is based on a somewhat smaller percentage of students receiving such services.

Table 6-5. Orientation and Cultural Services Offered, and Hours Received

Activity	Percentage Projects Offering	Percent. Students Receiving		Per-Student Hours Received	
		Mean	Median	Mean	Median
Orientation	79.3	35.6	32.0	1.5	1.0
Cultural	61.4	26.5	24.7	4.5	3.5

E. Summary

Overall, the data collected by means of the Student Participation Records indicate that most of the general types of services examined were offered by large percentages of the projects, ranging from about 61 percent for cultural services to essentially 100 percent for counseling. Furthermore, at this general level of specification, substantial percentages of students within the offering projects received one or more of the different types of services; these ranged from 26 percent for cultural services to 67 percent for counseling. Counseling was clearly the most common project activity, with about two-thirds of all project students across all the projects receiving some counseling time.

The other general finding is that, with few exceptions, an average student participating in a particular type of service did not receive many hours of that service. The average (mean) number of instructional hours for a student receiving special instruction from a project was a respectable 16.6 hours. However, the per-student figure dropped to 2.6 hours in the area of counseling, 1.5 hours in orientation services, and 4.5 hours in cultural services. (As noted earlier, none of these figures include staff preparation time.) It is possible, of course, that these latter types of services are much more important than the small hour figures would indicate. Some Project Directors believe, for example, that even a small amount of time in orientation or counseling can make a major difference in how a student perceives and reacts to the campus environment, and can thereby greatly improve that student's motivation and study habits.

CHAPTER 7. CHARACTERISTICS OF ELIGIBLE STUDENTS, AND THEIR RELATIONSHIPS TO SERVICES RECEIVED

The major purpose of this chapter is to describe some of the characteristics of freshman students listed by projects as eligible for SSDS services, and to examine the relationships between certain student variables, such as their background and entry characteristics, and the amount and types of project services those students received. A related goal is to define several profiles of student participation identified in this study, in terms of the specific patterns of services associated with each such profile. The projects' participation profiles serve an important role in Chapter 8, where they are used as one of the major predictors of project impact on student persistence, progress, and performance.

Whereas Chapters 4 and 6 presented data from Student Participation Records that were filled out for all students receiving services in the sample projects, this chapter summarizes information collected from the study's impact sample, i.e., freshman students who completed the fall and/or spring Student Surveys. The impact sample, as discussed in Chapter 2, was selected early in the academic year from among freshman students listed by the projects as eligible for SSDS services. During the academic year, many of the impact sample students received SSDS services, while some others did not.

A. Characteristics of Eligible Freshmen Students

As shown in Figure 7-1, the majority of SSDS-eligible freshman students in this study came from families with total parental incomes of less than $12 thousand. The students with the lowest parental incomes tended to be in private 2-year colleges, while students in public 4-year colleges and universities had the highest parental income levels. Table 7-1 indicates that the parental incomes of the eligible students were lowest for American Indians and Blacks, and highest for White students.

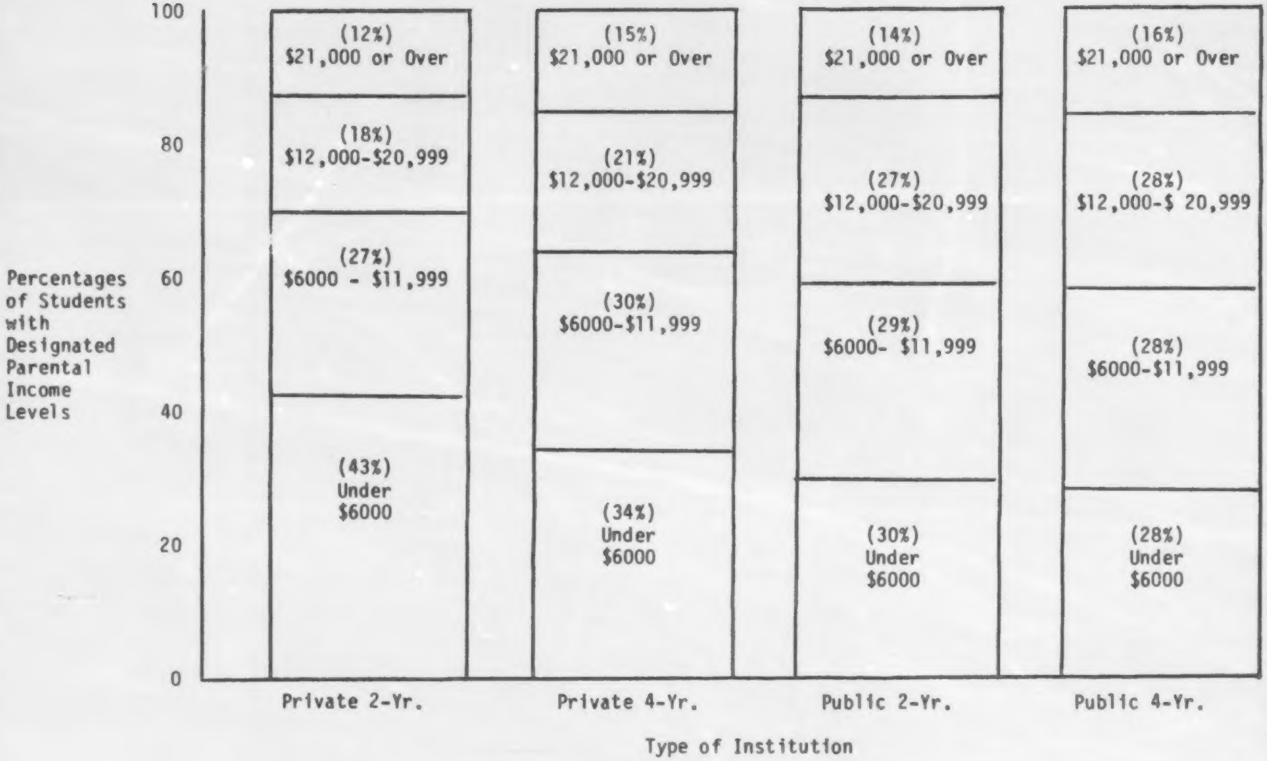


Figure 7-1. Percentages of Students in Different Types of Institutions Having Parents With Different Income Levels

Table 7-1. Average (Mean) Parental Income Levels for Eligible Students of Different Racial/Ethnic Groups

RACE	MEAN PARENTAL INCOME ($)
American Indian	8,648
Asian	11,039
Black	8,671
Hispanic	9,671
White	13,562
Other	10,091

Overall, about 63 percent of the study's freshman students designated as eligible for SSDS services were female. As Figure 7-2 shows, the percentage of females was slightly lower for Asian students than for other groups.

Figure 7-3 shows how the students' eligibility classifications, as defined by the Project Directors, related to the parental income levels of those students. As might be expected, the lower the level of parental income, the more likely it was that a student would be classified as eligible by reason of economic background. Interestingly, if a student's parents had low income, the probability of that student's being designated eligible by reason of educational deprivation was also low. Possibly the eligibility criteria of economic background and educational deprivation were viewed as mutually exclusive by some Project Directors (i.e., once they had checked the "economic background" criterion they felt no need to check another criterion), despite the directions on the questionnaire asking respondents to "check all that apply."

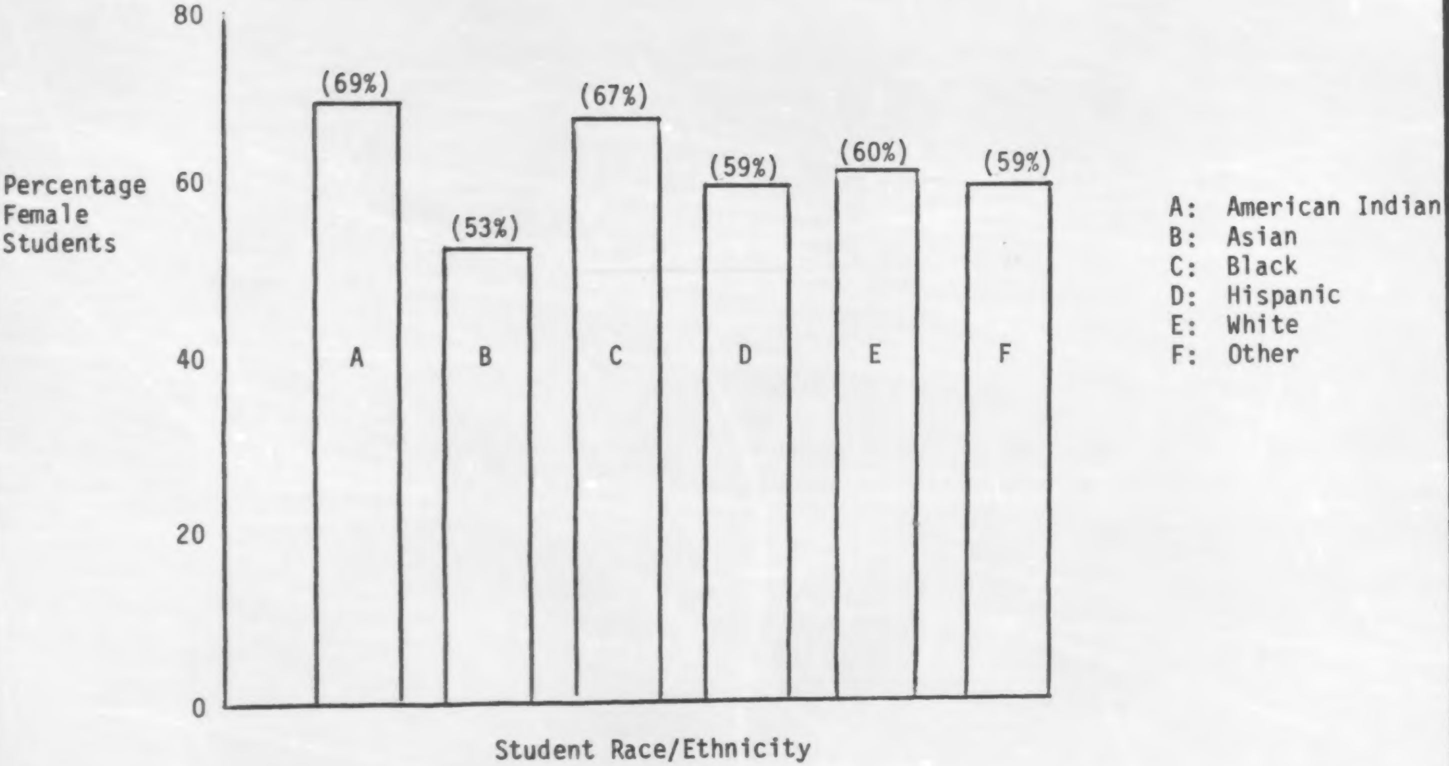


Figure 7-2. Percentages of Eligible Freshman Students Who Were Female, for Different Racial/Ethnic Groups

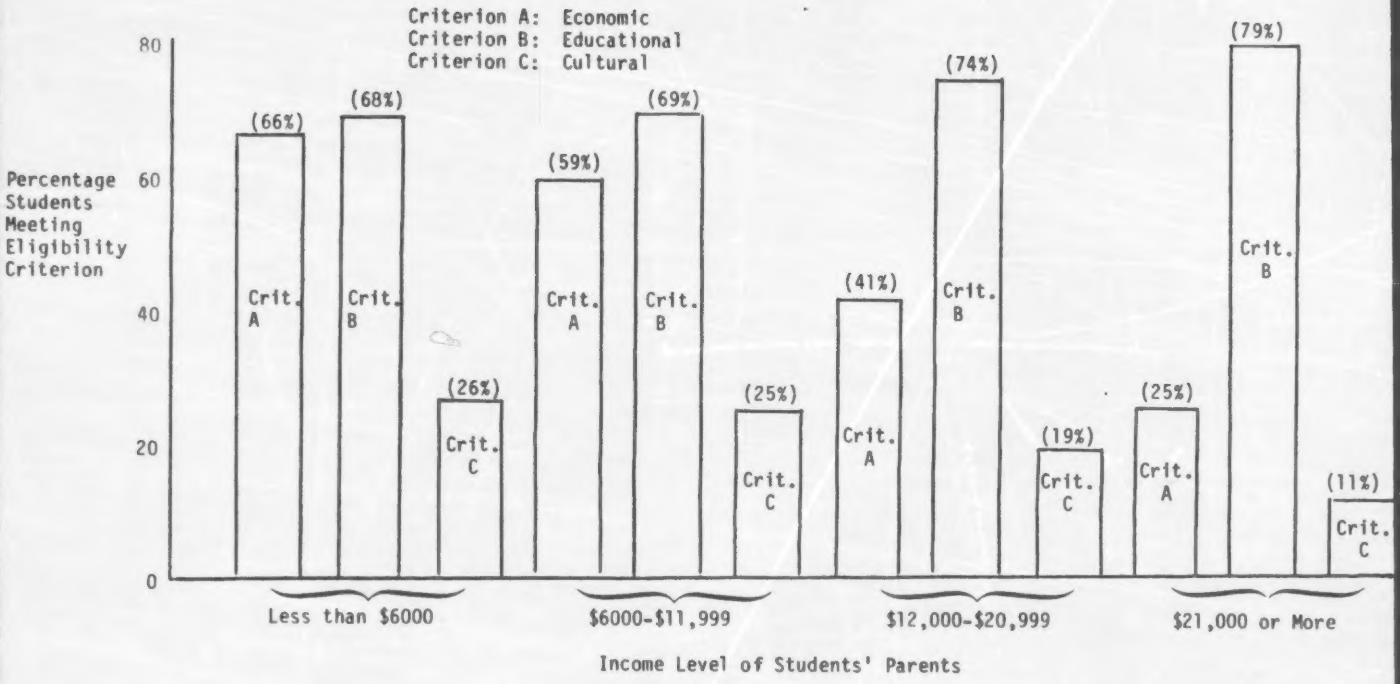


Figure 7-3. Percentages of Students Meeting Different Eligibility Criteria, for Different Levels of Parental Income

Other student characteristics examined in relation to their project-reported eligibility classifications were the students' self-rated academic skill levels (at the start of the academic year) (Figure 7-4) and their race/ethnicity (Figure 7-5). Figure 7-4 shows general agreement between the two indices, i.e., the lower the self-rating, the higher the probability that students would be designated by the projects as eligible by reason of educational deprivation. The relationship was not as strong as might have been expected, however, since 55 percent of students rating themselves as "Very Good" were classified as educationally deprived, and 25 percent of students rating their academic skills as "Very Poor" were not so classified. Also of interest, though not surprising, is the fact that minority students, especially American Indians, Asians, and Hispanics, were much more likely than Whites to be designated as eligible by reason of their cultural affiliation (Figure 7-5).

Projects were also asked to designate, for each student listed as eligible, the amount of SSDS services felt to be needed by that student ("Small," "Moderate," or "Large"). The results are shown in Figure 7-6 for different racial/ethnic groups, in Figure 7-7 for students of different parental income levels, and in Figure 7-8 for different types of institutions. (For all these figures, average need levels were calculated by giving "Low" need a scale value of 1, "Moderate" need a value of 2, and "Large" need a value of 3.) In general, the data indicate that service needs were perceived to be highest for Black students, for students with lower parental income levels, and for students in private 2-year colleges.

Finally, SSDS-eligible students in the study were questioned about their financial resources, including any loans, grants, earnings, parental aid, and waivers of institutional fees or tuition. The student responses are summarized in Tables 7-2 through 7-6. Each of these tables contains a matrix formed by students' parental income level (row headings) and type of institution (column headings). In Table 7-2, each cell of the matrix contains the percentage of students receiving an educational loan from a bank, the state, the Federal government, or some other source, and the average (mean) amount of that loan during the 1979-1980 academic year; these averages are based on only those

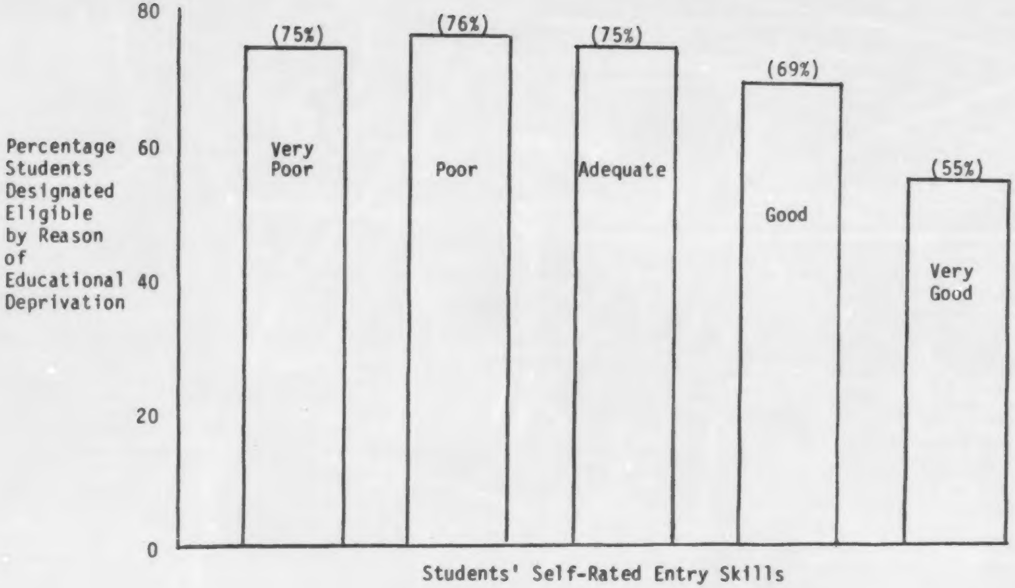


Figure 7-4. Percentages of Students With Different Self-Rated Skills Levels Classified as Eligible by Reason of Educational Deprivation

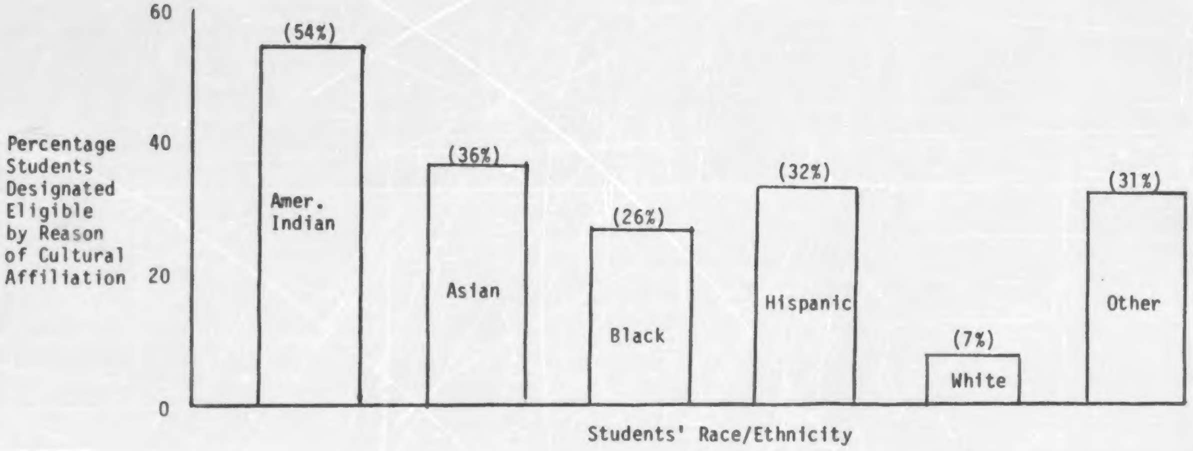


Figure 7-5. Percentages of Students of Different Racial/Ethnic Groups Classified as Eligible by Reason of Cultural Affiliation

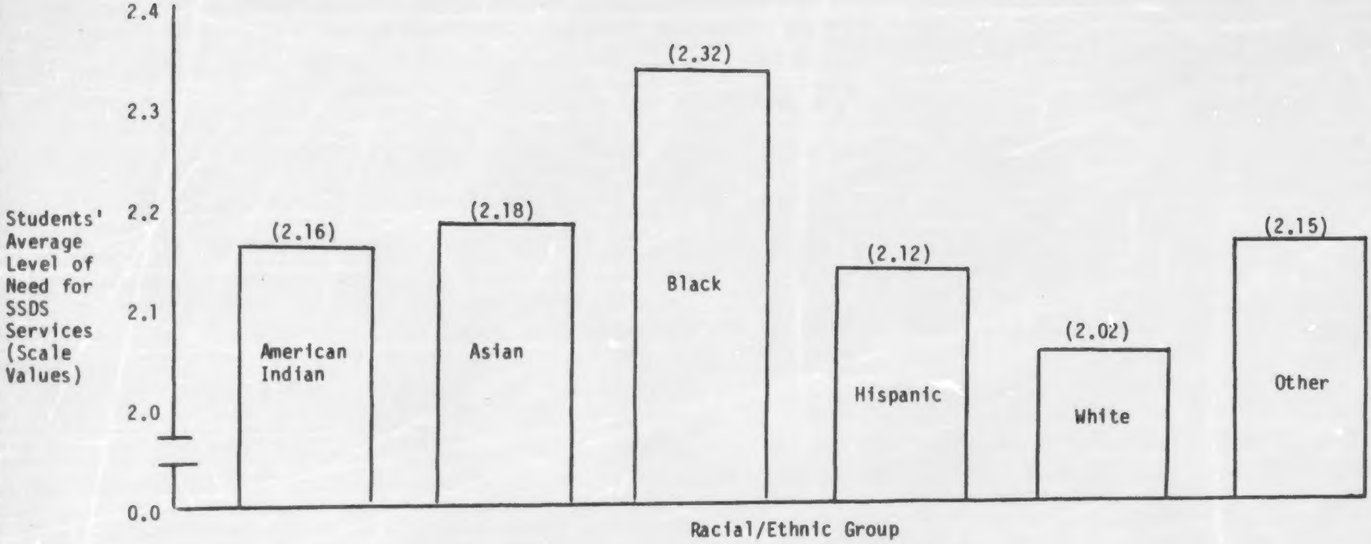


Figure 7-6. Average (Mean) Levels of Student Needs for SSDS Services (As Rated by Projects), for Students of Different Racial/Ethnic Groups

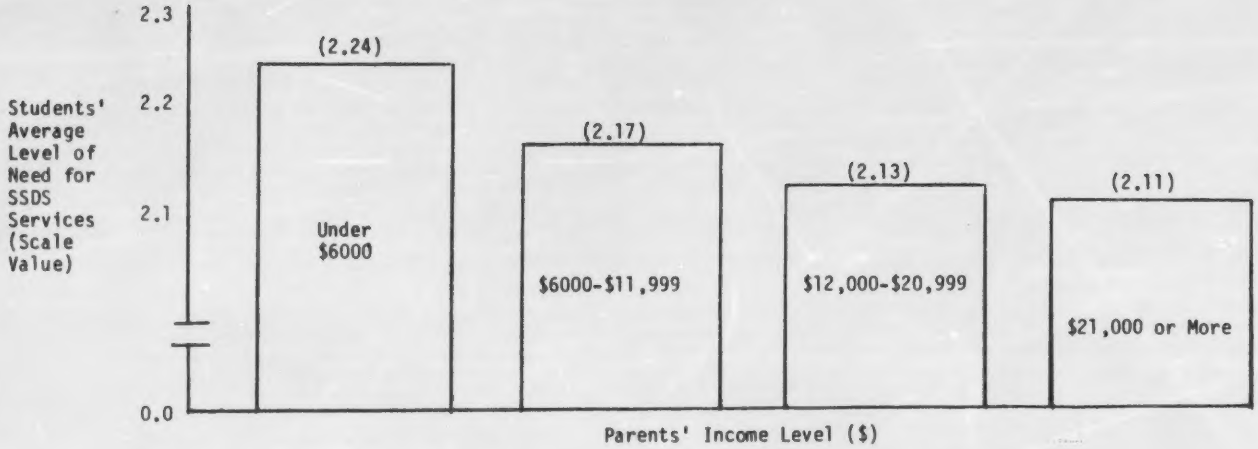


Figure 7-7. Average (Mean) Levels of Student Needs, for Students With Different Parental Income Levels

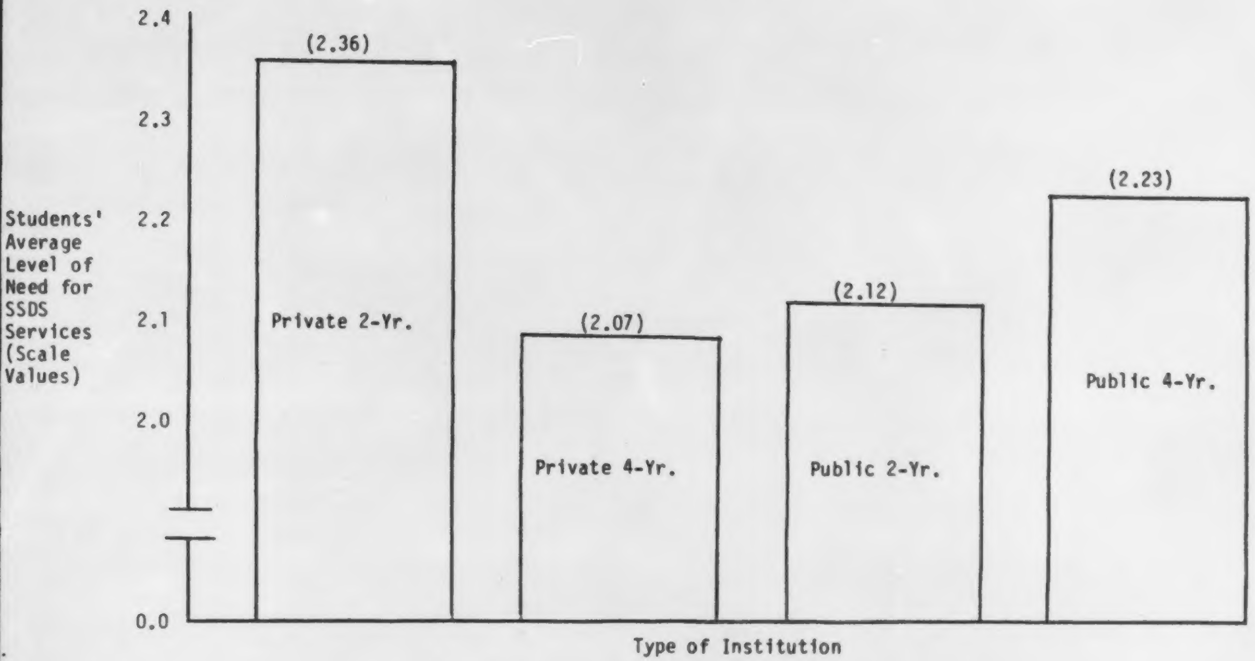


Figure 7-8. Average (Mean) Levels of Student Needs, for Students in Different Types of Institutions

students reportedly receiving a loan. Overall, the data indicate that larger percentages of eligible freshman students received loans in 4-year colleges and universities than in 2-year colleges. There was no clear pattern of relationship between parental income and probability of receiving a loan, although the lowest income group had the lowest overall percentage of students reporting loans. On the average, larger loans were reported in private colleges and universities than in public institutions, with the largest overall being in private 2-year colleges.

Table 7-2. Percentages of Eligible Freshman Students Receiving Educational Loans, and Average Amounts of Loans, for Different Types of Institutions and Different Levels of Parental Income

Parents' Yearly Income ($)	Type of Institution			
	Public 2-Yr.	Private 2-Yr.	Public 4-Yr.	Private 4-Yr.
Less than $6,000	11% $533	8% $2151	22% $784	16% $1162
6,000-11,999	12% $773	19% $1405	24% $731	23% $1221
12,000-20,999	14% $1055	24% $1736	22% $911	30% $1387
21,000 or More	14% $1395	19% $1796	17% $1104	31% $1747

Table 7-3 summarizes data on grants, scholarships, and tuition waivers received by the eligible students. The percentage figure shown in each cell is the total percentage of eligible students receiving a grant, scholarship, a tuition waiver from the institutions, or any combination of those forms of aid. The other figure in each cell is the total dollar amount of the aid, averaged across the students receiving such aid. It is evident that quite substantial percentages of the freshman students considered eligible for SSDS services received some form of financial support--up to 58 percent for low income students in public 4-year colleges and universities. Overall, the percentages of students receiving grants, scholarships, and/or tuition waivers were larger for eligible freshmen in 4-year than in 2-year institutions, and larger for students with low parental incomes; no meaningful differences were found between public and private institutions. On the average, the total dollar amount of the aid increased with decreasing levels of parental income. As with loans, the average dollar level was considerably greater for students in private institutions than for those in public institutions; this probably reflects the higher tuition levels in the private colleges and universities, which in turn would have created a greater need on the students' part for financial assistance.

Table 7-3. Percentages of Eligible Freshman Students Receiving Grants, Scholarships, and/or Tuition Waivers and Average Amounts of Aid, for Different Types of Institutions and Different Levels of Parental Income

Parents' Yearly Income ($)	Type of Institution			
	Public 2-Yr.	Private 2-Yr.	Public 4-Yr.	Private 4-Yr.
Less than $6,000	45% $786	48% $2068	58% $1174	50% $1848
6,000-11,999	48% $818	44% $1521	58% $1132	52% $1862
12,000-20,999	40% $766	56% $1605	45% $1008	48% $1298
21,000 or More	23% $569	14% $632	29% $836	31% $954

Students were asked specifically whether they were receiving a Federal Guaranteed Student Loan (GSL), a National Direct Student Loan (NDSL), or a Basic Educational Opportunity Grant (BEOG); these aid programs are of special interest in this study, as they constitute three of the major Federal aid programs to students in postsecondary institutions. Table 7-4 shows, for each type of institution and each level of parental income, the percentage of students receiving each type of Federal assistance. The Basic Educational Opportunity Grant was by far the most common form of aid, with over half the SSDS-eligible students in the lower parental-income levels receiving such a grant. Overall, the percentage of freshman students with Basic Educational Opportunity Grants decreased with increasing levels of parental income, but did not vary systematically with type of institution. Students in private institutions were somewhat more likely to receive Guaranteed Student Loans than those in public colleges and universities, and students in 4-year institutions were more likely to receive National Direct Student Loans than students in 2-year colleges.

Table 7-4. Percentages of Eligible Freshman Students Receiving a Federal Guaranteed Student Loan, a National Direct Student Loan, or a Basic Educational Opportunity Grant, for Different Types of Institutions and Different Levels of Parental Income

Parents' Yearly Income ($)	Type of Institution			
	Public 2-Yr.	Private 2-Yr.	Public 4-Yr.	Private 4-Yr.
Less than $6,000	GSL = 3% NDSL = 3% BEOG = 53%	4% 5% 59%	3% 16% 63%	3% 8% 58%
6,000-11,999	GSL = 3% NDSL = 3% BEOG = 52%	6% 7% 63%	3% 18% 60%	6% 11% 58%
12,000-20,999	GSL = 3% NDSL = 4% BEOG = 37%	7% 11% 53%	4% 15% 44%	7% 19% 46%
21,000 or More	GSL = 3% NDSL = 5% BEOG = 19%	13% 3% 10%	4% 8% 21%	11% 7% 17%

Not surprisingly, the percentage of eligible freshman students receiving financial contributions from their parents, and the average amount of that combination, both went up as the parents' income level went up. That relationship is shown below in Table 7-5, as is the fact that the percentages of students receiving parental aid were greater for 4-year institutions than for 2-year colleges. The average dollar amount of the parents' contribution was higher for students in private colleges and universities than for those in public institutions (even within a given level of parental income), again perhaps reflecting the private institutions' higher tuition levels.

Table 7-5. Percentages of Eligible Freshman Students Receiving Financial Support From Parents, and Average Amounts of Support, for Different Types of Institutions and Different Levels of Parental Income

Parents' Yearly Income ($)	Type of Institution			
	Public 2-Yr.	Private 2-Yr.	Public 4-Yr.	Private 4-Yr.
Less than 6000	23% $260	24% $332	31% $257	33% $312
6000-11,999	33% $279	28% $390	41% $288	38% $325
12,000-20,999	43% $342	49% $418	49% $386	46% $599
21,000 or More	48% $496	42% $846	52% $598	52% $763

As Table 7-6 shows, around 30 percent of the eligible freshman students overall had jobs during the academic year. The percentage of students holding jobs tended to be larger for public colleges and universities than for private institutions, but did not differ systematically between 2-year and 4-year institutions, or as a function of parental income level. The average number of dollars earned, calculated over a 32-week period, shows no meaningful relationships with either type of institution or parental income level.

Table 7-6. Percentages of Eligible Freshman Students Holding Jobs, and Average Earnings During Academic Year, for Different Types of Institutions, and Different Levels of Parental Income

Parents' Yearly Income ($)	Type of Institution			
	Public 2-Yr.	Private 2-Yr.	Public 4-Yr.	Private 4-Yr.
Less than 6000	32% $2494	23% $2646	32% $1957	33% $1995
6000-11,999	38% $2701	22% $2059	36% $2102	33% $2140
12,000-20,999	46% $3033	36% $1736	36% $2376	35% $2111
21,000 or More	41% $2692	16% $3728	35% $2780	33% $2533

B. Profiles of Student Participation in Project Services

For convenience in analyzing and interpreting SSDS program impact, it is valuable to generalize some aspects of the detailed student participation data into a relatively small number of broadly defined participation profiles, each of which characterizes some subset of the freshman students designated as eligible for SSDS services. For this reason, the Student Participation Records and the student responses to questions about SSDS-like services received outside the projects were examined for the impact sample. A total of 11 major profiles were identified, by procedures discussed later in Chapter 8, Effects of Students of Participation in Special Services. These profiles range from a group of students who received no SSDS or SSDS-like services at all, to a group that received substantial amounts of multiple types of services. The purpose of this section is to define each of the profiles in terms of the types and levels of SSDS and SSDS-like services received by students classified into that profile.

Tables 7-7 through 7-12 characterize the 11 participation profiles in terms of services provided by the SSDS projects. In each of these tables, the row headings are the profiles, the column headings are the average (per-student) numbers of hours of the particular service received during the academic year, and cell entries are the percentages of eligible students in a designated profile receiving the specified hours of service.

Table 7-7 shows that none of the students in Profile 0 through Profile 4 received any appreciable amount of instructional services from the projects; none had over two hours during the entire academic year, and most had no instructional time at all. Profiles 5 through 10, by contrast, are generally characterized by much more substantial amounts of project instruction--in some cases over 26 hours.

Tables 7-8 and 7-9 break out the instructional time provided by projects into group instruction and individual (tutorial) instruction, respectively. The major point of these tables is that Profiles 7 and 8 include only group instruction, whereas Profile 9 includes only tutorial instruction. Profiles 5, 6, and 10 include both group and tutorial instruction.

Table 7-7. Percentages of Students in Each Participation Profile Receiving Different Amounts of Instruction (Group and/or Tutorial) From Projects

Profile	Total Per-Student Hours of Service			
	0-2	3-9	10-25	26 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	100	0	0	0
5	12	45	24	19
6	9	39	24	28
7	5	19	32	44
8	3	17	35	45
9	13	49	27	11
10	0	8	21	70

Table 7-8. Percentages of Students in Each Participation Profile Receiving Different Amounts of Group Instruction From Projects

Profile	Total Per-Student Hours of Service			
	0-1	2-8	9-30	3 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	100	0	0	0
5	59	21	12	8
6	47	19	23	11
7	0	23	44	33
8	0	19	43	38
9	100	0	0	0
10	0	26	29	45

The pattern of profiles with respect to counseling time is indicated in Table 7-10. It can be seen that most students in Profile 4 and Profiles 7 through 10 received appreciable amounts of counseling time from the projects, while those in other profiles had essentially no project counseling. This same basic pattern is repeated for referrals and needs assessments provided by the projects (Table 7-11), and also for project orientation and cultural activities (Table 7-12); that is, only in Profiles 4, 7, 8, 9, and 10 did students receive any appreciable amount of any of these services.

Table 7-9. Percentages of Students in Each Participation Profile Receiving Different Amounts of Tutorial Instruction From Projects

Profile	Total Per-Student Hours of Service			
	0-1	2-4	5-10	11 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	100	0	0	0
5	30	23	28	19
6	38	20	18	24
7	100	0	0	0
8	100	0	0	0
9	0	34	32	34
10	0	27	25	48

Table 7-10. Percentages of Students in Each Participation Profile Receiving Different Amounts of Counseling From Projects

Profile	Total Per-Student Hours of Service			
	0	1-2	3-5	6 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	14	53	18	15
5	100	0	0	0
6	100	0	0	0
7	23	45	22	10
8	21	37	31	11
9	19	43	13	25
10	16	38	23	23

Table 7-11. Percentages of Students in Each Participation Profile Receiving Different Amounts of Referral and Needs Assessment Services From Projects

	Total Per-Student Hours of Service			
Profile	0	1	2-4	4 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	17	14	29	40
5	100	0	0	0
6	100	0	0	0
7	12	11	24	53
8	10	10	20	60
9	9	22	27	42
10	12	12	23	53

Table 7-12. Percentages of Students in Each Participation Profile Receiving Different Amounts of Orientation and Cultural Activity Services From Projects

Profile	Total Per-Student Hours of Service			
	0	1	2-6	7 or More
0	100	0	0	0
1	100	0	0	0
2	100	0	0	0
3	100	0	0	0
4	45	21	19	15
5	100	0	0	0
6	100	0	0	0
7	32	14	31	23
8	24	11	41	24
9	43	19	18	20
10	38	22	28	12

Tables 7-13 through 7-15 summarize the various profiles in relation to SSDS-like services received from sources outside the SSDS projects, based on responses to questions in the Student Survey. (As noted in Chapter 2, the student responses are considered highly prone to errors, and thus are used only to amplify or further explicate the basic patterns defined in terms of the more reliable participation records.) In these tables the row headings are again the profile numbers, but the column headings are somewhat subjective labels such as "Used Rarely" and "Used a lot," rather than specific numbers of hours of services received.

As noted in Chapter 2, when a student's participation records showed receipt of a particular type of service, and when the student reported that he/she had received that type of service, there was no way to determine whether any of that service was provided outside the project. For purposes of Tables 7-13 through 7-15, a student is counted as having received a particular type of outside service only where the information is unambiguous. For example, a student is counted as having received outside counseling only if the student reported having had counseling and the participation records for that student did not show receipt of project counseling. Thus, the tables should be interpreted as showing any additional types of SSDS-like services received by students outside the projects but not as reflecting cases where students may have received the same kind of service both inside and outside the projects.

Table 7-13, in conjunction with Tables 7-7 through 7-9, shows that, whereas Profiles 0 through 3 all have essentially no project services of any type, Profiles 1 and 3 do include outside group instructional services. Similarly, Tables 7-13 and 7-14, in conjunction with Tables 7-7 through 7-10, show that project counseling in Profile 4 is augmented by outside group and tutorial instruction; that project group instruction and counseling in Profile 7 are augmented by outside tutoring; and that project tutoring in Project 9 is augmented by outside group instruction. Table 7-15 shows that Profiles 2 and 3, which include no project services, do include outside counseling; it also shows, in conjunction with Table 7-17, that project instruction in Profile 6 is supplemented by outside counseling.

Table 7-13. Percentages of Students Reporting Different Levels of Use of Outside Group Instructional Services

Profile	Frequency of Student Use of Outside Service			
	Never Used	Rarely Used	Used Some	Used a Lot
0	86	14	0	0
1	37	18	34	11
2	73	27	0	0
3	18	13	45	24
4	38	19	28	15
5	100	0	0	0
6	100	0	0	0
7	100	0	0	0
8	100	0	0	0
9	29	18	30	23
10	100	0	0	0

Table 7-14. Percentages of Students Reporting Different Levels of Use of Outside Tutorial Instruction

Profile	Frequency of Student Use of Outside Service			
	Never Used	Rarely Used	Used Some	Used a Lot
0	75	25	0	0
1	17	8	64	11
2	68	32	0	0
3	18	13	48	21
4	28	24	33	15
5	100	0	0	0
6	100	0	0	0
7	0	0	63	37
8	62	38	0	0
9	100	0	0	0
10	100	0	0	0

Table 7-15. Percentages of Students Reporting Different Levels of Outside Counseling

Profile	Frequency of Student Use of Outside Counseling			
	Never Used	Rarely Used	Used Some	Used a Lot
0	52	48	0	0
1	35	65	0	0
2	0	0	79	21
3	0	0	55	45
4	100	0	0	0
5	41	59	0	0
6	0	0	64	36
7	100	0	0	0
8	100	0	0	0
9	100	0	0	0
10	100	0	0	0

All of these relationships between profiles and service patterns are summarized below in Figure 7-9. The profiles are listed along the left margin of the figure. The first column to the right of the profiles indicates the type(s) of services received from the projects by students in each profile; the final (right-most) column indicates any additional type(s) of SSDS-like services provided to students by sources outside the projects. For purposes of this summary figure, a student is considered not to have received a service if participation records showed the amount of that service was very small (two hours or less for total instruction, one hour or less of tutorial or group instruction), or if the student reported that he/she had "never" or "rarely" received the service.

Figure 7-9 shows that Profiles 0 through 3 all represent no project services, but different combinations of outside services. Profiles 5 and 6 both involve instruction alone from the projects, with students in Profile 6 also receiving counseling from outside the projects. Profile 4 includes project counseling and outside instruction. Profiles 7 through 9 include counseling and either group or tutorial instruction, and may also involve one other type of outside services, while Profile 10 includes counseling and both types of instruction from the projects.

C. Relationships Between Student Characteristics and Services Received

Table 7-16 shows how the parents' income level was related to the types and amounts of services received by the students, both inside and outside the SSDS projects. The first three columns apply to project services, while the last three pertain to SSDS-like services provided outside the projects. Each cell in the table indicates the percentage of students in that family-income group receiving the designated type of service, and the average number of hours of that service received by those students. As discussed in Section B, students are counted as having received outside services only where there is an unambiguous indication that those services were provided by an outside agency and not by the projects themselves.

Profile	Types of Project Services	Additional Outside Services
0	None	None
1	None	Instruction (Group or Tutoring)
2	None	Counseling
3	None	Group Instruction and Counseling
4	Counseling	Group and Tutoring Instruction
5	Instruction (Group and/or Tutoring)	None
6	Instruction	Counseling
7	Group Instruction and Counseling	Tutoring Instruction
8	Group Instruction and Counseling	None
9	Tutoring and Counseling	Group Instruction
10	Group Instruction, Tutoring, and Counseling	None

Figure 7-9. Summary of Project Services and Additional Types of Outside Services Associated With Each Performance Profile

Table 7-16. Percentages of Students Receiving Different Types of Services, and Average Numbers of Hours of Services Received by Those Students, for Different Levels of Parental Income

Parents' Yearly Income ($)	Project Services			Outside Services		
	Instruction (Group + Tutor.)	Counseling	Orientation and Cultural	Group Instruction	Tutoring	Counseling
Under $6000	47% 26.55	51% 5.30	39% 6.67	45% 2.99	47% 2.96	43% 3.18
6000-11,999	42% 25.48	46% 5.13	36% 5.95	45% 2.93	44% 2.84	46% 3.03
12,000-20,999	39% 28.33	41% 3.85	29% 4.52	39% 2.87	43% 2.82	48% 2.97
21,000 or More	32% 29.72	32% 2.67	19% 3.37	34% 2.82	44% 2.75	54% 2.88

One important trend in Table 7-16 is that, for all types of project services, the percentage of students receiving those services goes down with increasing parental income. A similar relationship is evident for outside group instruction, but there is no clear trend for outside tutoring and the direction of the relationship is reversed for counseling, i.e., larger percentages of the more affluent students receive outside counseling. There is one slight anomaly when one examines the mean number of hours of the service received, averaged across the receiving students. Although a more affluent student was less likely to receive project instruction, the average number of hours for those who did receive project instruction at all increased with increasing parental income. For all other types of project and outside service, however, the average number of hours decreased with increasing parental income. Thus, overall, the figure would seem to indicate a targeting of project services to the less affluent students among those deemed eligible for SSDS services.

Relationships between the students' self-perceived skill levels and problems (as measured early in the academic year), and the amounts of instruction they received from the projects during that year, are summarized in Table 7-17. The skill level for a given student was calculated from that student's responses to questions asking about different types of skills (reading, mathematics, study skills, etc.). Similarly, each problem-severity scale value was calculated from responses to several different questions pertaining to a common type of problem. In general, the table shows little apparent relationship between the severity of the students' self-perceived problems early in the year, and the amount of project instruction they received. There was, however, a significant trend for lower-skilled students (as self-perceived at the start of the year) to receive more hours of project instruction, which suggests some success in project targeting of services.

Analyses were also run on the relationships between students' self-perceived skill levels and problems, and the amounts of academic and personal counseling those students received from the projects (see Appendices 7-1 through 7-4). In general, no interpretable relationships were found between those variables, the only exceptions being a tendency for students with greater (self-perceived) academic and campus problems to receive greater amounts of personal counseling.

Table 7-17. Self-Perceived Skill Levels and Severity of Problems at Beginning of Year for Students Receiving Different Amounts of Project Instruction

Ave. Per-Student Hours Instruction	Self-Perceived Skill Level*	Severity of Academic Prob.**	Severity of Campus Prob.**	Severity of Personal Prob.**
0-2	3.46	1.73	1.46	1.57
3-9	3.38	1.74	1.41	1.55
10-25	3.33	1.81	1.45	1.58
26 or More	3.30	1.73	1.43	1.58

* Value on Scale with 1 = Very Poor, 2 = Poor, 3 = Adequate, 4 = Good, 5 = Very Good.

** Value on Scale with 1 = Not a Problem, 2 = Small Problem, 3 = Medium-Size Problem, 4 = Very Big Problem.

The remaining analyses in this chapter are also concerned with possible relationships between student characteristics and the services received by those students, but examine the broad participation profiles instead of specific types of services. Table 7-18 shows, for each parental income level, the percentages of students falling into the different profiles. (Note: This table shows column percentages, so it is the column figures rather than the rows that add up to 100 percent.) It can be seen that, as students' parental income increases, the percentages of those students in Profiles 0, 1, and 2 (no project services) also increases; by contrast, with increasing parental income the percentages of students in Profiles 9 (project tutoring and counseling) and 10 (project tutoring, group instruction and counseling) tend to decrease. Both of these trends give additional evidence of a tendency for less affluent students to receive more services.

Another student characteristic, race/ethnicity, is shown in relation to participation profiles in Table 7-19. Here again, column percentages are used, so that one can determine how the members of each racial/ethnic group were distributed among the profiles. Larger percentages of White students than of

Table 7-18. Percentages of Students Falling Into the Different Participation Profiles, for Different Levels of Parental Income

Profile	Parental Income Level			
	Less than $6000	$6000-$11,999	$12,000-$20,999	$21,000 or More
0	7	9	14	20
1	3	4	5	6
2	8	10	10	13
3	17	16	15	17
4	25	26	21	16
5	1	2	2	2
6	4	3	3	2
7	6	4	6	4
8	5	5	6	5
9	15	12	11	8
10	9	9	7	7
	100%	100%	100%	100%

Table 7-19. Percentages of Students of Different Racial/Ethnic Groups Falling Into Different Profiles

Profile	Race/Ethnicity of Students					
	American Indian	Asian	Black	Hispanic	White	Other
0	3	14	6	10	19	8
1	2	11	3	3	6	5
2	5	10	7	8	15	6
3	9	23	20	15	13	17
4	42	13	28	23	15	23
5	1	2	1	2	3	2
6	3	8	2	5	3	6
7	6	3	6	8	3	6
8	11	3	5	7	4	4
9	10	5	13	12	10	16
10	8	8	9	7	9	6
	100%	100%	100%	100%	100%	100%

Black or Hispanic students were in Profiles 0, 1, and 2 (no project services), while this relationship is reversed for Profiles 7, 8, and 9, all of which involve multiple types of project services. Although these findings suggest that more services were given to minority students, the trend was not totally consistent, as the percentage of White students in Profile 3 (no project services) was smaller than the percentages for Blacks and Hispanics, and the pattern is ambiguous for Profile 10 (project tutoring, group instruction, and counseling). Furthermore, race/ethnicity is confounded with parental income level, so that one cannot unambiguously interpret apparent relationships between race/ethnicity and levels of services.

The participation profiles were also examined in relation to the students' sex, but no consistent patterns of relationship were evident in the data (see Appendix 7-5).

The final set of analyses for this chapter examined the participation profiles in relation to the students' academic and occupational aspirations and expectations (see Appendices 7-6, 7-7, 7-8). Although there were statistically significant variations in the participation profiles of students having different aspirations and expectations, there was no interpretable trend in the relationships. That is, students with higher aspirations or expectations did not consistently receive smaller or larger amounts of project services as indicated by their participation profiles.

D. Summary

This chapter examined the background characteristics of, and SSDS services received by the study's impact sample (SSDS-eligible freshman students who varied greatly in the types and amounts of special services they received). The major findings were as follows:

- Most of the students had parents whose total incomes were less than $12,000. The lowest parental incomes were reported by students in private 2-year colleges, and the highest by students in public 4-year institutions. Minority students, on the average, reported lower parental incomes than White students.

- Many students were receiving some form of financial aid. Overall, about 38 percent received educational grants, 15 percent had educational loans, and 33 percent were receiving some financial support from their parents. Almost 30 percent had income from jobs during the academic year.

- For all types of project services, the percentage of students receiving those services goes up as the income level of the students' parents goes down. This suggests a targeting of services to the less affluent students among those deemed eligible for SSDS participation.

- Students with lower level entry skills (as self-reported at the start of the academic year) tended to receive more hours of project instruction, again suggesting some targeting of SSDS services.

CHAPTER 8. EFFECTS ON STUDENTS OF PARTICIPATION IN SPECIAL SERVICES

This chapter describes the results of analyses performed to determine the effects of SSDS and SSDS-like services on several student outcome measures. Some of these measures were derived from institutional and project records (primarily transcripts), while others were obtained from the students' responses to questions about their self-perceived skill levels, academic and other problems, academic and vocational aspirations, etc.

The basic analytic tool for all of the analyses reported below was the linear regression technique. All of these analyses used the individual student as the unit of analysis, thereby making maximal use of the highly detailed data collected in this study on the intensity and mode of each student's participation in various types of SSDS and SSDS-like activities. Independent variables such as student ethnicity, student dependency status, students' parents' income, type of host institution, institutions' enrollment, and levels of tuition and fees, were used as conditioning variables in the analyses. That is, they represent variables whose possible effects on the outcomes were taken into account statistically, but which are not generally under the control of the projects and therefore are not among the predictor variables of greatest policy relevance. The samples of students used for the impact analyses included all freshmen students from whom a Fall 1979 Survey or a Spring 1980 Survey, or both, were received.

A brief comment may be appropriate at this point concerning this report's use of the phrase, "SSDS and SSDS-like services." This terminology reflects the fact that in some host institutions, funds from several sources were pooled in a single special-services project. These sources might include not only SSDS and other Federal programs, but also special state funds and direct institutional support. In such cases it is often impossible or extremely difficult to determine whether the services provided to a particular student at a particular time are being paid for by SSDS, by some other program, or by a combination of programs. The perspective we have taken in this study is that the important goal is to learn what services were particularly beneficial to the kinds of students the SSDS program was created to serve, regardless of what program or programs happened to be paying for those services in a given situation. To the extent that effective project strategies and services can be so identified, those strategies and services could presumably be emphasized in future SSDS projects to improve the effectiveness of the overall SSDS program.

The remainder of this chapter is organized into four sections. Section A describes the outcome measures and predictor variables used in the impact analyses. Section B describes the analytic procedures used to determine SSDS impact on student performance measures obtained from transcripts, and discusses the results of those analyses; Section C provides the same information for impact analyses using student self-reported outcomes. Section D summarizes the overall findings of the impact analyses.

A. Variables Used in the Impact Analyses

Outcome Variables

Two sets of outcome variables were used in the impact analyses. The first set consisted of four measures of the students' first-year academic work, derived mainly from the transcripts obtained for each student. Transcript-derived outcomes included: (1) persistence, an index of whether or not the student remained enrolled during his/her entire freshman year, (2) intensity of the students' efforts, as measured by total credit hours of course work attempted in the freshman year, (3) progress, as measured by total credit hours completed in the year, and (4) performance, the grade point average for the freshman year.

Data on student persistence were obtained from the student transcripts, supplemented by data from an item in the Spring Student Survey which asked the student whether he or she was still enrolled. The intensity and progress variables were constructed using data from the transcripts, and from the host institutions' catalogs. The transcripts provided information about the numbers of credit hours attempted and completed; these numbers were then converted into proportions of a year's full academic load, using catalog information that defined "full load" for each institution. Finally, the performance data were derived directly from the transcripts, but with grades from some institutions re-scaled so that all were on a four-point scale.

The second set of outcome variables consisted of seven measures derived from the Fall and Spring Student Surveys. Each of these variables was computed as a change score, i.e., the Spring value minus the Fall value. (Approximately two-thirds of the students responding to the Spring or Fall Survey responded to both Surveys, and these students provided the core for calculations of change scores.) Three of the student-derived variables were related to the students' educational and career aspirations and expectations. The first of these, "Educational Desires," was based on a survey question asking what was the highest educational attainment (e.g., academic degree) the students wished to achieve; more specifically, the variable was a measure of increase or decrease in the desired attainment level between the Fall and Spring Surveys. A second variable, "Educational Expectations," represented the Fall-to-Spring change in the highest educational attainment expected by the students. "Career Plans," the third variable, represented the Fall-to-Spring change in the type of work the students planned to be doing five years after they completed their education; to create this variable, different job categories were placed on a four-point scale of status and social desirability.

A fourth student-reported outcome variable was a measure of the change in the students' perceptions of their own academic skills. The skill ratings from which the change measures were computed were based on seven items in the Student Surveys. Those items asked the students to rate themselves on a five-point scale in reading, writing, mathematics, study skills, and test-taking skills, and on quality of homework and ability to do college work. The mean of the seven ratings was computed for both the Fall and the Spring Surveys, and change scores were then calculated.

Three additional student-derived variables were measures of the changes in students' perceptions of the problems they had in attending college. The three variables represented three problem areas: academic problems, general campus problems, and personal problems. Each of the three variables was based on responses to seven different items or statements that students were asked to check if applicable. For the Academic Problems variable, for example, the seven statements included, "Courses I wanted were not available," "I do not have enough time to study," and "I make poor grades." Items used in the General Campus Problems variable included "Lack of information about the requirements," "There is no one on campus to talk to about my problems," and "I do not feel like I belong here." The Personal Problems variable was based on a different set of items, which included, for example, "Financial problems," "My job takes too much time," and "I am in poor health." Again, change scores were computed for each variable by determining the differences between the composite score values for the Fall and Spring Surveys.

Predictor Variables

With the large amount of data collected on students, projects, and institutions, it would have been possible to analyze many different items of information in relation to the outcome measures. However, any such wholesale use of predictor variables in the impact analyses would have led to difficulties in interpreting the findings, and would probably have produced many spurious relationships among variables on the basis of chance alone. For these reasons, the number of predictor variables examined was constrained by focusing on variables that appeared to have particular policy relevance, and by combining individual data elements or items into composite variables. In addition, some preliminary exploratory analyses were performed to help identify variables that might have predictive value. A total of 11 predictor variables were used in the impact analyses.

The predictor of greatest potential interest in this study was the 11-value categorical variable, Participation Profiles. This variable summarized much of the available information about the types and amounts of SSDS and SSDS-like services actually received by the students. More specifically, it combined extensive data of two general types: data on services given to participating students by the projects, as recorded by staff members in the Participation Records, and data reported by the students themselves (in the Student

Survey) concerning the types of SSDS-like services they had received in the host institutions. Chapter 7 defines each of the 11 categories or profiles of the Participation Profiles variable, in terms of the mix of SSDS and SSDS-like services represented by that profile. Basically, each student was assigned a set of indices indicating whether that student had received any project counseling, whether he/she had received more than one hour of project tutoring, and whether he/she had received more than one hour of project group instruction. Similar indices, for SSDS-like services, were developed from the Student Survey data. When combined, these six indices yielded a 64-category classification of all possible profiles. (Six indices, each with two possible values equals 2^6 or 64 combinations.) However, many of these profiles were represented by only a few students; for this reason, and to simplify the analyses, logically similar and sparsely-represented profiles were combined, resulting in a total of 11 categories or profiles as described in Chapter 7.

Three other predictor variables were based on characteristics of the host institutions. The variable, Institution Type, represented both the institution's type of control (public or private) and the highest level of offering (two-year versus four-year or higher). The other two institutional variables were Cost (yearly tuition plus fees), and Institution Size (total student enrollment).

Individual project characteristics were represented by two predictor variables: a Budget variable computed by dividing total project funds by the total number of students served by the project; and a Project Acceptance scale derived from two items in the Project Director Interview. Those items asked how well the students served by the project were regarded by the regular students and the regular faculty at that institution.

Four additional predictor variables, derived from the Student Surveys, represented characteristics of the students. Student Ethnicity had three categories: Black, White, and other minorities (American Indian, Hispanic, and Oriental). Student Incentive was the sum (in dollars) of the grants and any tuition or fee waivers the student had received. Family Income was the amount of annual income the student reported that his/her parents received.

The final predictor variable was a three-category index of the students' Dependency Status. The first category, called for convenience the "independent student," included all students who were married, all students who were living in their own homes or apartments, and all students who were over 21 and not living with their parents. All remaining students were divided into two "dependent student" groups; one group consisted of dependent students from low-income families, and the other of dependent students from higher-income families.

B. Analyses of Impact on Students' Persistence, Intensity of Efforts, Progress, and Performance

The impact analyses reported here used outcome measures based primarily on student transcripts, as discussed above in Section A. Student persistence was given special emphasis, both because remaining enrolled is an essential step in gaining from a college experience, and because the available data on that variable were considered at least as accurate as the information on any other outcome. The analysis of program impact on student persistence used a logistic regression technique. That technique was particularly appropriate, as it is specifically designed to examine the simultaneous effect of several predictors on a dichotomous outcome measure (in this case, students' completion or non-completion of the academic year). The procedure yields a multiple regression equation relating the predictor variables to the odds that the outcome in question will occur, i.e., that the student remains enrolled through the academic year. That is, the results can be interpreted as predicting how those odds will go up or down as a function of the predictor variables.

Table 8-1 presents a non-technical summary of the results of the final analysis using persistence as the outcome measure. Readers wishing a more detailed and technical account of these results are referred to Appendix 8-1. The left-hand column of the table lists the different values of the predictor variables being examined. The right-hand column gives, for each such predictor value the odds that a student represented by that value will still be enrolled at the end of the academic year.

Table 8-1. Non-Technical Summary of Logistic Regression Analysis Predicting Student Persistence

Predictor Variable	Odds of Students' Persisting	Multiplier
*Baseline Condition (Intercept)	6.63	
Institutional Type (Baseline: Public 4-year)		
Private 2-Year	** -	
Public 2-Year	-	
Private 4-year	15.38	(2.32)
Participation Profile		
(Baseline: No Services)	-	
Profile 1	-	
Profile 2	-	
Profile 3	9.28	(1.40)
Profile 4	12.40	(1.87)
Profile 5	-	
Profile 6	13.72	(2.07)
Profile 7	-	
Profile 8	-	
Profile 9	13.53	(2.04)
Profile 10	14.98	(2.26)
Dependency Status (Baseline: Dependent, High Income)		
Independent	3.98	(0.60)
Dependent/Low Income	-	
Monetary Incentives (Baseline: Mean Value)	6.72	(1.01)

***D = 0.03

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*Value at intercept represents a student in a public 4-year institution, who received no SSDS-like services, who is from a family with higher than average income and is living at home or in a dormitory, and who receives approximately $520 in tuition grants or fee waivers.

**The "-" indicates the coefficient is not significant at the 0.05 level.

***The D statistic is comparable to R^2 in the usual multiple regression formulation.

It will be noted that the first row-heading in the left-hand column is labeled, "Baseline Condition." This condition represents a somewhat arbitrarily selected combination of predictor variables against which other conditions can conveniently be compared to determine the effects of the various predictor variables. Specifically, the baseline or intercept condition represents a student enrolled in a public 4-year college or university, who is receiving no SSDS or SSDS-like services, who is living at home, whose parents' income is above average for this sample, and who has received grants and tuition/fee waivers totaling $520.34 (the average amount for all students in the impact sample). From the right-hand column it can be seen that the odds in favor of such a "baseline" student's completing the academic year were 6.63 to 1.

The next group of conditions designated in the left-hand column represents students in non-baseline institutions, i.e., institutions other than public 4-year colleges and universities. Odds are shown in the right-hand column only for the one condition where those odds were significantly different from the odds for the baseline condition. The odds for students to persist in private 4-year colleges and universities were 15.38 to 1, or 2.32 times the odds for those in public 4-year institutions. (The multiplier factor--in this case, 2.32--is shown in parentheses to the right of the odds.)

A similar interpretation may be made for the different participation profiles. (The baseline condition represents a no-service profile, and is equivalent to the "Profile 0" described in Chapter 7.) It will be seen that five of the profiles increased the persistence odds significantly: Profile 3, which represents students who received only outside (non-project, SSDS=like) counseling plus group instruction; Profile 4, which includes project counseling plus outside tutorial and/or group instruction; Profile 6, which includes project tutorial instruction plus outside counseling; Profile 9, which includes project tutorial instruction plus outside group instruction, and Profile 10, which includes both project and outside group instruction, tutorial instruction, and counseling. The general pattern here is that the more types of services provided, the greater the increase in odds of a student's persisting (staying enrolled) through the academic year. The highest odds, for example, are for Profile 10, which includes the full set of project and outside services; for this group the odds are 2.26 times as high as those for the baseline (no-services) condition.

The next largest impact on persistence was associated with the student dependency status. Students who were "independent," i.e., who were married and or who lived in their own apartment or home, had persistence odds only about half as favorable (high) as those for non-married students living with parents or in a dormitory.

Finally, the value of 6.72 for "Monetary Incentives" represents the persistence odds for a student receiving $100 more in grants plus waivers than the baseline average of $520.34. The effects for each $100 increment were roughly cumulative, so that for a student with grants and waivers totalling $1020.34, or $500 above the baseline value, the persistence odds were better than 7 to 1. Though this effect is statistically significant, it is evident that financial assistance in the form of grants and waivers, had less impact on persistence than did some of the profiles of SSDS and SSDS-like services.

The odds-multiplying effects shown in Table 8-1 were generally cumulative, at least in direction if not in absolute magnitude. Thus the highest predicted odds apply to a student enrolled in a private 4-year institution, who had all categories of SSDS and SSDS-like services, who was living with parents or in a dormitory, and who was receiving sizable grants and/or waivers.

Table 8-2 displays the statistics from the final regressions on the intensity-of-effort and progress criteria. Standard linear regression techniques were used for these analyses, as the outcome measures were continuous variables. Since the variables included in the equations were the same, and the resulting statistics were very similar, the two analyses will be discussed together. The results show that both the intensity of the students' efforts (credits attempted) and the students' progress (credits completed) were positively related to some combinations of program participation, to the size of the grants and waivers received, the amount of tuition, the size of the students'

Table 8-2. Linear Regression Predicting Intensity (Course Units Attempted) and Progress (Course Units Completed)

	Regression Predicting:			
	Intensity		Progress	
Predictor Variable	Regression Coefficient	Unique Variance Explained (Percentage)	Regression Coefficient	Unique Variance Explained (Percentage)
Baseline Conditions (Intercept)*	28.67		23.74	
Institutional Type		0.016		0.005
Private 2-Year	-4.28		-3.54	
Public 2-Year	-2.27		-	
Private 4-Year	-7.51		-5.44	
Participation Profiles		0.014		0.010
Profile 0 (Baseline)	-		-	
Profile 1	3.32		2.75	
Profile 2	2.40		-	
Profile 3	-		-	
Profile 4	4.34		3.80	
Profile 5	-		-	
Profile 6	2.86		4.29	
Profile 7	3.35		2.69	
Profile 8	4.09		3.37	
Profile 9	4.29		3.17	
Profile 10	3.01		2.77	
Student Ethnicity		0.011		0.033
Black	-2.47	(0.006)	-5.65	(0.024)
Other Minorities	-2.86	(0.005)	-4.04	(0.009)
Incentives ($100's)	0.21	0.021	0.28	0.030
Family Income ($1000's)	0.12	0.004	0.19	0.009
Project Acceptance	1.32	0.027	1.05	0.014
Proj. Budget ($100's)	-	-	0.02	0.002
Inst. Enrollment ($1000's)	-0.31	0.020	-0.26	0.012
Tuition & Fees ($100's)	0.37	0.007	0.41	0.007
F		23.77		24.97
Degrees of Freedom		21/3176		21/3177
R^2		0.132		0.139
Criterion Mean		32.619		28.833
Criterion S.D.		11.876		13.045

*Intercept represents a student in a public 4-year institution, who receives no SSDS-like service, is White, has $568.40 in grants and waivers, is paying $857.55 in tuition and fees, and has parents whose annual income is $10,409.60 per year.

families' income, and the degree to which the SSDS project students were accepted (i.e., well regarded) at their institutions. The results were also similar in that both intensity and progress were negatively influenced by enrollment in other than public 4-year institutions, by minority group status, and by institutional size.

Of first importance to this study are the impacts of SSDS and SSDS-like services (Participation Profiles) on these outcomes. As the percentages of unique variance accounted for (shown in the right-hand column for each outcome measure) indicate, program participation uniquely accounted for only 1.4 percent of the total variance of the intensity criterion, and 10 percent of the variance explained by the regression. In the regression predicting the students' progress, only 0.9 percent of the total variance and 6.8 percent of the explained variance were uniquely determined by the students' program participation. The regression coefficients for the individual participation profiles in both regression show that the extent of participation had little differential impact.

These regressions show that factors other than participation largely determine the students' levels of progress and intensity of effort. Monetary incentives (grants and waivers) and institutional acceptance tended to increase the students' intensity of effort whereas larger institutional student bodies were associated with lower values on that criterion. In the regression predicting the amount of course work completed (progress), the major positive factors were again student monetary incentives, and institutional acceptance of project students; student minority status and size of institutional enrollment were the major negative factors predicting progress.

While the participation profiles were not major contributors to the explained variance in these regressions, they account for enough to be meaningfully compared with the impact of student incentives. Roughly speaking, students participating in an SSDS program and receiving all types of services, but not receiving any grants or waivers, tended to attempt about the same course load (number of credits) as students not receiving special services but having over

$1,400 in grants and waivers. For the progress criterion, students with full services but no financial incentives tended to complete about the same number of credit hours as students with no service and almost $1,000 in incentives.

Table 8-3 shows the results of the regression predicting the student performance criterion (cumulative grade point average). The major predictors of this outcome measure were student ethnicity and the monetary incentives. Minority students, especially Black students, were predicted to have lower GPAs. This pattern is consistent with the results of two of the analyses described above. However, the relationships of performance to institutional type and to participation profiles contrast sharply with those earlier analyses. The trend for performance indicates higher grades for students in private 4-year colleges and universities than for public 4-year institutions. In addition, it shows lower performance for students receiving SSDS or SSDS-like services. All of these results are discussed further in the final section of this chapter.

Table 8-3. Linear Regression Predicting Performance (Grade Point Average)

Predictor Variable	Regression Coefficient	Unique Variance Explained (Percentage)
Baseline Conditions (Intercept)*	2.404	0.921
Institutional Type		
Private 2-year	-	
Public 2-year	0.097	
Private 4-year	0.317	
Participation Profiles		0.545
Profile 0 (Baseline)	-	
Profile 1	-	
Profile 2	-	
Profile 3	-0.135	
Profile 4	-	
Profile 5	-	
Profile 6	-	
Profile 7	-0.239	
Profile 8	-0.140	
Profile 9	-	
Profile 10	-0.140	
Student Ethnicity		3.385
Black	-0.355	
Other Minorities	-0.150	
Incentives ($100's)	0.015	2.276
Tuition & Fees ($100's)	-0.013	0.299
Family Income ($1000's)	0.007	0.355

F = 17.78 Degrees of Freedom = 3615/18

$R^2 = 0.081$

Performance mean = 2.251 Performance S.D. = 0.787

*Intercept represents a student in a public 4-year institution, who receives no SSDS-like services, is White, has $568.40 in grants and waivers, is paying $857.55 in tuition and fees, and has parents whose annual income is $10,409.60 per year.

C. Analyses of Impact on Student-Reported Outcomes

None of the seven student-reported outcomes measured in this study revealed in linear regression analyses any interpretable predictive relationships with any of the predictor variables discussed up to this point. Because of our special interest in the Participation Profile variable, however, that variable was recoded into a set of three variables, to see if any associations could be found with those outcomes. The new variables, group instruction time, tutoring time, and counseling time, each combined in a single scale the total amount of time a student spent in the designated type of activity, whether or not that activity was provided by an SSDS project. When these new variables were analyzed, some statistically significant but very weak correlations with the outcomes were found. Self-perceived changes in skill ratings showed a positive (0.08) correlation with amount of tutoring activity. Reduction in students' perceived problems had a -0.03 correlation with amount of tutoring time and a 0.05 correlation with counseling time. These very low correlations are statistically significant only because of the large number of degrees of freedom in the analyses.

D. Discussion of Results

This discussion of the impact analyses will focus on the outcomes derived from official transcripts, as the analyses using student-reported outcome data yielded only a small number of significant relationships, and those were of very marginal strength. The analyses based on transcript data, while also accounting for only modest percentages of total variance in the outcome measures, showed a larger number of important, and in most cases quite consistent, trends in the relationships between policy-relevant predictor variables and outcomes.

From a program policy viewpoint, the predictor variable of greatest interest is the Participation Profile variable derived from participation records and student self-reports, as analyses using this variable directly reflect the impact of SSDS and SSDS-like services on students' chances for success in their postsecondary efforts. The analyses reported above indicate that the patterns of services provided to students constituted one of the most important predictors examined here in determining the students' persistence in their academic studies, the number of course units that they attempted, and the number of course units that they completed. In all three of these cases, the relationships was positive, i.e., more services were associated with more favorable values on the three outcome measures. The contribution of the services is most clearly illustrated by the fact that students receiving the full range of SSDS and SSDS-like services examined here had predicted odds of persisting (staying enrolled through the academic year) 2.26 times the odds for students who received no such services; these are more favorable odds than those predicted for students receiving the highest level of financial incentives (grants and waivers) found in this study, but not receiving any SSDS or SDSS-like services. The analysis for course units attempted, while less dramatic, nevertheless shows the participation profiles to have explained more of the outcome variance than student ethnicity, income level of students' parents, or the size of institutional tuition and fees. Participation profiles were less effective in predicting the number of course units completed, but were still about as effective as a $900 differential in financial incentives, or a $14,000 difference in parental income.

Surprisingly, at least on first consideration, full-service participation by students was associated with lower grade point averages. For example, the mean GPA for students in the two profiles representing the largest amount of received services was 2.25, whereas that for students in the two profiles representing the least services was 2.38. Although this may appear to contradict the findings for persistence, intensity of effort, and progress, the explanation probably lies in selection factors. Generally speaking, it is the more needy students who receive the most services from the projects; in many cases, this greater need reflects a poorer educational background and poorer entry skills on the part of the students concerned. Thus, even though the services are successful in helping to keep students enrolled, and in encouraging them to attempt and complete more courses, the students receiving the greatest services still have basic academic deficiencies that are difficult if not impossible to overcome in a single academic year, and these deficiencies evidence themselves in poorer grades for that initial year. In this connection it is important to remind readers that the impact sample consisted entirely of freshmen. If the explanation proposed here is correct, students receiving greater services over multiple years should be found in the follow-up survey (to be performed in the 1981-82 academic year when students still enrolled will be juniors) to have overcome or at least reduced their academic disadvantage relative to other sample students receiving fewer services.

In any event, it is probably realistic to consider persistence as the most important outcome measure, and then courses attempted and completed as the next most important, at least for the first academic year or two. If students do not stay enrolled, or do not complete courses, any benefits they might derive from the college experience are automatically greatly limited. Conversely, if they do stay enrolled and complete courses, even if their grades are poor, their potential benefits remain high and the institution/project continues to have an opportunity to help those students achieve their educational goals. From this point of view it can be argued that the types of services provided by SSDS projects were valuable to participating students despite the negative relationship found between amount of services and grade point averages in the students' freshman year.

Three other predictor variables are also of potential policy relevance, as they represent factors that are being influenced, or presumably could be directly or indirectly influenced, by the projects' administration and staffs. These are (1) the host institutions' level of acceptance of, and regard for, the project students, which may reflect in some measure the project staffs' own attitudes, (2) the financial incentives received by participating students, which projects may be able to influence by their referral services, and (3) the projects' per-student budgets, which might be affected by national program policy and/or by projects' focusing their funds on fewer students.

The first of these variables, institutional acceptance of project students, was positively associated with the course units attempted and completed by students. In terms of percentage of variance explained, acceptance of project students was the best predictor of course units attempted, and one of the best predictors of course units completed. However, it is not possible to demonstrate the direction of causality, if any causality exists; one tenable explanation is that the superior performance of students in some projects was the cause rather than the result of their better acceptance on campus.

Monetary incentive (grants and waivers) was a relatively strong predictor for all four transcript-based outcome measures. Students receiving larger amounts of such aid tended to have higher levels of persistence, course units attempted, course units completed, and grade point averages.

Projects' per-student budget showed a significant relationship with only one outcome: course units completed. This was a weak positive association in which students in projects spending more dollars per participating student tended to complete more units.

Student ethnicity and type of institution were the strongest predictors among the control variables examined. Membership in either minority group--Black, or "other minority"--showed a fairly strong negative association with three of the outcomes: course units attempted, course units completed, and grade point average. While these findings are consistent with earlier research, it is of greater interest that students' minority-group membership was not associated with reduced persistence. That is, Black and other minority students were as likely as White students to remain enrolled.

Type of institution was significantly related to all four transcript-based outcomes. Within this predictor variable, the major contrasts were between the public and private 4-year institutions. In comparison with students from private 4-year colleges and universities, those from public 4-year institutions tended to attempt and to complete more course units. However, the public-institution students also showed less persistence and poorer grades. Unfortunately, the data from this study offer no clear cues as to the reasons for these relationships.

Another conditioning variable, size of the institution's enrollment, showed relatively large negative associations with course units attempted and completed by students. That is, SSDS-eligible students in larger institutions tended to take and complete fewer courses.

Finally, higher levels of income of students' parents were associated with greater numbers of course units attempted and completed, and also with higher grade point averages. This last finding is not unexpected, but it is interesting to note that student financial incentives (grants and tuition/fee waivers) were apparently effective in offsetting the negative effects of poverty backgrounds for some students; such incentives were stronger predictors of course units attempted and completed, and grade point averages, than the level of parental income, at least within the income range examined in this study.

E. Summary

Regression analyses were used to examine the effects of certain student, project, and participation variables on a variety of outcome measures related to the students' postsecondary studies. These analyses were limited to SSDS-eligible students in their freshman year, and thus to short-term program effects. The major findings were as follows:

- Students who received a full range of SSDS and SSDS-like services were more likely to stay enrolled in their postsecondary institution through the full academic year (compared with students of comparable background who received few or no special services).
- Students receiving full-range services were likely to attempt and to complete more course units during the academic year.
- Students receiving full-range services were likely to have lower grade-point averages, but this appears to be a selection effect rather than a negative effect of the services, i.e., projects tend to give more services to students with more obvious learning deficiencies and poorer entry skills.

- Project students in institutions whose administrators and staffs express greater acceptance of, and regard for, the project and its students were likely to attempt and to complete more course units. It is not clear, however, whether the greater number of courses attempted and completed was an *effect* or a *cause* of the institutions' higher regard for the project students.
- Students receiving larger amounts of monetary aid (grants and waivers) tended to have higher levels of persistence (i.e., to complete their freshman year), more course units attempted and completed, and better grade point averages.
- Minority group students tended to attempt and complete fewer course units, and to receive lower grades. However, Black and other minority students were as likely as White students to complete their freshman year.
- SSDS-eligible students in larger institutions tended to take and complete fewer courses.
- Students whose parents had higher incomes tended to take and complete more courses and to receive higher grades.

APPENDICES

Appendix 4-1. Percentages of Majority (White) Students in Student Bodies in Different Types of Institutions

Percentage of Majority Students

Frequency Percent Row Pct. Col Pct.	2-Year Private	2-Year Public	4-Year Private	4-Year Public	Total
00-10%	0		32	21	53
	0.00	0.00	9.61	6.42	16.03
	0.00	0.00	59.96	40.04	
	0.00	0.00	47.76	15.05	
11-50%	11	39	0	6	56
	3.15	11.81	0.00	1.71	16.68
	18.91	70.83	0.00	10.26	
	87.50	35.12	0.00	4.01	
51-89%	2	47	13	63	124
	0.45	14.21	3.90	18.81	37.38
	1.21	38.03	10.44	50.32	
	12.50	42.26	19.40	44.11	
90-100%	0	25	22	52	100
	0.00	7.61	6.61	15.71	29.92
	0.00	25.43	22.08	52.49	
	0.00	22.62	32.84	36.83	
TOTAL	12	112	67	142	333
	3.60	33.63	20.12	42.64	100.00

Statistics for 2-Way Tables

Chi-Square 164.081 DF = 9 PROB = 0.001

Appendix 4-2. Percentages of Minority Group Faculty Members at Host Institutions

Percentage of Minority Faculty

```
              PERCENTAGE OF MINORITY FACULTY
PF_MINOR    FREQUENCY  CUM FREQ   PERCENT  CUM PERCENT

00-05%          91         91      27.447       27.447
06-10%          84        176      25.275       52.723
11-50%          84        259      25.145       77.868
51-100%         74        333      22.132      100.000
```

Appendix 4-3. Percentages of Minority Faculty Members in Different Types of Institutions

Percentage of Minority Faculty

Frequency Percent Row Pct. Col Pct.	2-Year Private	2-Year Public	4-Year Private	4-Year Public	Total
00- 05%	2	23	23	44	91
	0.45	7.01	6.76	13.23	27.45
	1.64	25.53	24.62	48.21	
	12.50	20.83	33.58	31.03	
06- 10%	0	18	11	55	84
	0.00	5.41	3.30	16.57	25.28
	0.00	21.39	13.07	65.54	
	0.00	16.07	16.42	38.85	
11- 50%	2	59	2	21	84
	0.45	17.82	0.45	6.43	25.15
	1.79	70.86	1.79	25.56	
	12.50	52.98	2.24	15.07	
51-100%	9	11	32	21	74
	2.70	3.40	9.61	6.42	22.13
	12.21	15.38	43.42	28.99	
	75.00	10.12	47.76	15.05	
TOTAL	12	112	67	142	333
	3.60	33.63	20.12	42.64	100.0

Statistics for 2-Way Tables

Chi-Square 124.103 DF = 9 PROB = 0.0001

Appendix 4-4. Percentages of Full Time Students In Different Types of Situations

Percentage of
Full Time Students

Frequency Percent Row Pct. Col Pct.	2-Year Private	2-Year Public	4-Year Private	4-Year Public	Total
00- 50%	0	63	2	13	77
	0.00	18.82	0.45	3.77	23.04
	0.00	81.67	1.95	16.38	
	0.00	55.95	2.24	8.85	
51- 75%	9	39	0	44	93
	2.70	11.81	0.00	13.31	27.83
	9.71	42.45	0.00	47.84	
	75.00	35.12	0.00	31.22	
76-100%	3	10	66	85	164
	0.90	3.00	19.67	25.56	49.13
	1.83	6.11	40.04	52.02	
	25.00	8.93	97.76	59.93	
TOTAL	12	112	67	142	333
	3.60	33.63	20.12	42.64	100.00

Statistics for 2-Way Tables

Chi-Square 185.261 DF = 6 PROB = 0.0001

Appendix 4-5. Freshman Retention Rate for Different Types of Institutions

Freshman Retention Rate

Frequency Percent Row Pct. Col Pct.	2-Year Private	2-Year Public	4-Year Private	4-Year Public	Total
25- 50%	2 0.45 2.80 12.50	27 8.21 50.96 24.40	0 0.00 0.00 0.00	25 7.45 46.24 17.46	54 16.11
51- 60%	9 2.70 7.00 75.00	61 18.22 47.20 54.17	3 0.90 2.33 4.48	56 16.78 43.46 39.34	129 38.60
61- 70%	2 0.45 4.04 12.50	4 1.20 10.78 3.57	18 5.41 48.52 26.87	14 4.08 36.66 9.58	37 11.14
71- 80%	0 0.00 0.00 0.00	12 3.60 19.92 10.71	20 6.01 33.20 29.85	28 8.48 46.87 19.88	60 18.09
81- 90%	0 0.00 0.00 0.00	8 2.40 14.95 7.14	26 7.81 48.60 38.81	19 5.86 36.45 13.73	53 16.07
TOTAL	12 3.60	112 33.63	67 20.12	142 4.264	333 100.00

Statistics for 2-Way Tables

Chi-Square	108.623	DF = 12	PROB = 0.0001

Appendix 4-6. Number of Years Projects Have Been Operating In Different Types of Institutions

Type of Institution

Frequency Percent Row Pct. Col Pct.	0-2 Years	3-6 Years	7 Years	Total
2-Year Private	0	11	2	12
	0.00	3.15	0.45	3.60
	0.00	87.50	12.50	
	0.00	7.36	1.27	
2-Year Public	10	67	35	112
	3.00	20.02	10.61	33.63
	8.93	59.52	31.55	
	13.80	46.72	29.99	
4-Year Private	11	37	20	67
	3.30	10.96	5.86	20.12
	16.42	54.48	29.10	
	15.18	25.58	16.55	
4-Year Public	51	29	61	142
	15.46	8.72	18.47	42.64
	36.24	20.45	43.31	
	71.02	20.35	52.19	
TOTAL	72	143	118	333
	21.76	42.85	35.39	100.00

Statistics for 2-Way Tables

Chi-Square 62.757 DF = 6 PROB = 0.0001

Appendix 4-7. Turnover Rate in Project Staff at Different Types of Institutions

Type of Institution

Frequency Percent Row Pct. Col Pct.	0-10%	10-25%	25-100%	Total
2-Year Private	0	12	0	12
	0.00	3.60	0.00	3.60
	0.00	100.00	0.00	
	0.00	10.28	0.00	
2-Year Public	26	55	31	112
	7.81	16.42	9.41	33.63
	23.21	48.81	27.98	
	21.28	46.83	33.31	
4-Year Private	26	14	27	67
	7.81	4.20	8.11	20.12
	38.81	20.90	40.30	
	21.28	11.99	28.70	
4-Year Public	70	36	36	142
	21.08	10.83	10.73	42.64
	49.44	25.40	25.16	
	57.45	30.90	37.99	
TOTAL	122	117	94	333
	36.70	35.06	28.25	100.00

Statistics for 2-Way Tables

Chi-Square	51.720	DF = 6	PROB = 0.0001

Appendix 4-8. Sex of Project Directors Relative to Percentage of Male Project Staff

Percentage Male
on Project Staff

Frequency Percent Row Pct. Col Pct.	Female	Male	Total
00- 33%	94	34	129
	28.28	10.32	38.60
	73.26	26.74	
	56.97	20.49	
34- 50%	63	87	150
	18.89	26.06	44.94
	42.03	57.97	
	38.05	51.74	
51-100%	8	47	55
	2.47	13.98	16.46
	15.02	84.98	
	4.98	27.77	
TOTAL	165	168	333
	49.64	50.36	100.00

Statistics for 2-Way Tables

Chi-Square	58.428	DF = 2	PROB = 0.0001

Appendix 4-9. Sex of Project Directors Relative to Percentage of Female Institutional Faculty

Percentage Female Faculty

Frequency Percent Row Pct. Col Pct.	Female	Male	Total
00- 25%	39	46	85
	11.78	13.68	25.47
	46.27	53.73	
	23.73	27.17	
26- 40%	80	97	177
	24.07	29.00	53.07
	45.36	54.64	
	48.50	57.58	
41-100%	46	26	71
	13.78	7.68	21.46
	64.23	35.77	
	27.77	15.25	
TOTAL	165	168	333
	49.64	50.36	100.00

Statistics for 2-Way Tables

Chi-Square	7.763	DF = 2	PROB = 0.0206

Appendix 4-10. Joint Distribution of Percentage of Minority Faculty at Host Institution and Ethnicity of the SSDS Project Director

Percentage of
Minority Faculty

Frequency Percent Row Pct. Col Pct.	Black	Other	White	Total
00-05%	47	0	44	91
	14.10	0.00	13.34	27.45
	51.39	0.00	48.61	
	25.89	0.00	41.89	
06- 10%	30	29	25	84
	9.05	8.62	7.61	25.28
	35.80	34.10	30.10	
	16.61	63.03	23.88	
11- 50%	40	17	27	84
	11.89	5.06	8.20	25.15
	47.29	20.10	32.60	
	21.83	36.97	25.74	
51-100%	65	0	9	74
	19.43	0.00	2.70	22.13
	87.79	0.00	12.21	
	35.67	0.00	8.49	
TOTAL	181	46	106	333
	54.47	13.67	31.85	100.00

Statistics for 2-Way Tables

Chi-Square	89.226	DF = 6	PROB = 0.0001

Appendix 4-11. Mean Number of SSDS Project Staff Members at Different Types of Institutions

Type of Institution	Number of Institutions	Total Number of Staff	Number Staff Per Institution
Two-year colleges	124	3629	29.27
Private four-year colleges	67	1523	22.73
Public four-year colleges	142	6627	46.67
All Institutions	333	11779	35.38

Appendix 4-12. Distribution of Time Commitment of Project Staff and Student Status of Staff for Different Sizes of Projects

	Number of	Mean Number	Percentage of Staff Committed			Percentage of Staff
(Number of Clients)	Projects	Staff Per Project	Less than Halftime	Halftime	Fulltime	Classified as Students
039-200	99	22.4	76.8	5.1	18.1	72.0
201-500	158	31.7	70.9	12.3	16.8	68.9
501-2116	76	59.8	79.9	10.7	9.4	82.6
ALL PROJECTS	333	35.4	75.5	10.4	14.2	74.8

Appendix 4-13. Sex and Ethnic Identification of Project Staff

	Percentage All Project Staffs
Sex	
Female	57.8
Male	42.2
Ethnicity	
Black	31.1
Hispanic	7.4
Other Minorities	7.5
White	54.0

Appendix 4-14. Project Directors' View of Needed Staff Improvement

Improvement Area	Percentage of 333 PD's Saying Improvement Needed
Staff commitment and morale	5.9
Working style of staff	5.9
Training and experience	1.2

Appendix 4-15. Mean Number of Participating Students Per SSDS Project for Different Types of Institutions

Type of Institution	Number of Colleges	Participants Per Project
Two-year colleges	124	524.3
Private four-year colleges	67	158.6
Public four-year colleges	142	437.8
All institutions	333	413.8

Appendix 4-16. Distribution of Client Ethnicity

(Based on Final Performance Report, Special Services, U.S. Office of Education, Computer Sciences, Corp., January 1980.)

Ethnicity	Number of Clients	Percent
American Indian/Alaskan	2754	2.21
Asian/Pacific Islander	3011	2.41
Black	61765	49.46
Hispanic	21560	17.27
White	35777	28.65

Appendix 4-17. Distribution of Client Eligibility

(Based on Final Performance Report, Special Services, U.S. Office of Education, Computer Sciences Corp., January 1980.)

Eligibility Criteria	Number of Clients	Percent
Low Income	61472	49.23
Cultural Need	10268	8.22
Educational Need	41499	33.23
Physically Disabled	5575	4.46
Limited English	6053	4.85

Appendix 4-18. Source and Amount of Project Funds

Source of Funds	Number of Proj. Receiving Funds	Percent of Proj. Receiving Funds	Dollars Per Project
Federal	333	100.0	$106,106.45
State	100	30.0	56,303.48
Other	92	27.6	32,894.40

Appendix 4-19. Types of In-Kind Services Received by Projects

Type of Service Received	Percent of Project Receiving Service (N = 333)
Office/Classroom Space	89.5
Clerical Assistance	31.0
Instructional Services	54.6
Counseling Services	39.6
Telephone/Postage	51.0

Appendix 5-1. Percentages of Institutional Administrators Who Gave High Priority to Different Higher Education Goals by Institutional Type

Higher Education Goal	Two-Year Colleges	Private Four-Year Colleges	Public Four-Year Colleges
Retain all freshmen through degree	10	30	18
Give each student individual attention	61	6	54
Help disadvantaged students succeed in college	48	15	36
Develop students social skills	0	0	0
Develop students academic skills	44	62	43
Remedy the academic deficiencies of disadvantaged students	56	29	20
Develop students aesthetic awareness	3	0	0
Develop students cultural awareness	0	0	15
Develop students consumer awareness and skills	3	0	1
Enhance the institution's academic respectability	4	36	30
Help students analyze values and beliefs	8	52	24
Help students clarify career interests and aspirations	78	31	30
Help students develop self-confidence and self-esteem	5	6	6
Help students learn to analyze information and make decisions	4	12	20
Develop an enthusiasm for learning	3	0	28
Prepare students for graduate or profession school	3	6	14
Prepare students to compete in the labor market	57	15	32
Prepare students to assume leadership roles	4	49	15

Appendix 5-2. Percentages of Project Directors Who Gave High Priority to Different Higher Education Goals by Institutional Type

Higher Education Goal	Two-Year Colleges	Private Four-Year Colleges	Public Four-Year Colleges
Retain all freshmen through degree	30	14	44
Give each student individual attention	34	31	16
Help disadvantaged students succeed in college	25	23	23
Develop students social skills	0	6	0
Develop students academic skills	48	92	55
Remedy the academic deficiencies of disadvantaged students	41	42	36
Develop students aesthetic awareness	0	0	0
Develop students cultural awareness	0	0	7
Develop students consumer awareness and skills	0	0	0
Enhance the institution's academic respectability	1	0	10
Help students analyze values and beliefs	32	31	13
Help students clarify career interests and aspirations	50	8	13
Help students develop self-confidence and self-esteem	19	6	14
Help students learn to analyze information and make decisions	30	86	51
Develop an enthusiasm for learning	4	31	20
Prepare students for graduate or profession school	16	0	32
Prepare students to compete in the labor market	49	2	42
Prepare students to assume leadership roles	20	21	26

Appendix 5-3. Institutional Administrators' Perception of the Academic Credibility of the SSDS Project for Different Types of Institutions

Adm. View of
Proj. Credibility

FREQUENCY PERCENT ROW PCT COL PCT	2-YEAR COLLEGE	PRIVATE 4-YEAR	PUBLIC 4-YEAR	TOTAL
2)POOR	15 4.60 61.33 12.37	0 0.00 0.00 0.00	10 2.90 38.67 6.81	25 7.51
3)FAIR	35 10.61 36.55 28.49	12 3.45 11.90 17.16	50 14.96 51.55 35.09	97 29.03
4)GOOD	52 15.57 36.15 41.80	39 11.71 27.20 58.21	53 15.79 36.66 37.02	143 43.06
5)EXCELLENT	22 6.46 31.65 17.34	17 4.95 24.29 24.63	30 8.99 44.06 21.08	68 20.40
TOTAL	124 37.24	67 20.12	142 42.64	333 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE 20.090 DF= 6 PROB=0.0027

Appendix 5-4. Project Directors' Perceptions of the Academic Credibility of the SSDS Project for Different Types of Institutions

PD View of
Project Credibility

FREQUENCY PERCENT ROW PCT COL PCT	2-YEAR COLLEGE	PRIVATE 4-YEAR	PUBLIC 4-YEAR	TOTAL
1)VERY POOR	4	0	0	4
	1.20	0.00	0.00	1.20
	100.00	0.00	0.00	
	3.23	0.00	0.00	
2)POOR	0	0	17	17
	0.00	0.00	5.25	5.25
	0.00	0.00	100.00	
	0.00	0.00	12.30	
3)FAIR	50	17	39	106
	15.12	4.95	11.57	31.64
	47.77	15.66	36.57	
	40.59	24.63	27.14	
4)GOOD	54	26	45	124
	16.12	7.66	13.47	37.25
	43.27	20.56	36.17	
	43.28	38.06	31.60	
5)EXCELLENT	16	15	41	72
	4.80	4.50	12.35	21.66
	22.18	20.79	57.02	
	12.90	22.39	28.97	
7)MISSING	0	10	0	10
	0.00	3.00	0.00	3.00
	0.00	100.00	0.00	
	0.00	14.93	0.00	
TOTAL	124	67	142	333
	37.24	20.12	42.64	100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 5% OF THE CELLS HAVE EXPECTED *COUNTS LESS THAN 5.
TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE 85.376 DF = 10 PROB = 0.0001

Appendix 5-5. Institution Administrators' Perceptions of the Academic Credibility of the SSDS Project for Different Amounts of Contact of Project Directors With Other Programs

Frequency of
PD Contact With
Other Programs

FREQUENCY PERCENT ROW PCT COL PCT	2)POOR	3)FAIR	4)GOOD	5)EXCELLENT	TOTAL
< 1 PER DAY	0 0.00 0.00 0.00	17 5.15 28.18 17.72	44 13.11 71.82 30.45	0 0.00 0.00 0.00	0 0.00
1 TO 2 PER DAY	21 6.31 18.40 84.00	38 11.48 33.51 39.55	25 7.53 21.97 17.48	30 8.95 26.12 43.87	114 34.26
3 TO 4 PER DAY	4 1.20 3.18 16.00	28 8.50 22.51 29.28	65 19.42 51.45 45.10	29 8.63 22.86 42.30	126 37.75
5 + TIMES	0 0.00 0.00 0.00	13 3.90 40.12 13.45	10 3.00 30.86 6.97	9 2.82 29.01 13.84	32 9.73
TOTAL	25 7.51	97 29.03	143 43.06	68 20.40	333 100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 5% OF THE CELLS HAVE EXPECTED *COUNTS LESS THAN 5.
TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE 74.611 DF= 9 PROB=0.0001

Appendix 5-6. Percentages of Project Director Participation In Institutional Level Decision-Making in Different Types of Institutions

Extent of PD Participation in Decision-Making	Two-Year Colleges	Private Four-Year Colleges	Public Four-Year Colleges
No Participation	0	0	7
Some Participation	28	34	12
A Considerable Amount	21	22	25
An Extensive Amount	51	44	56

Appendix 5-7. Percentages of Project Directors Indicating Various Levels of Service on Institutional Decision-Making Committees in Different Types of Institutions

Number of Committees Served On	Two-Year Colleges	Private Four-Year Colleges	Public Four-year Colleges
None	16	19	12
One	30	16	30
Two	42	12	41
Three or more	13	53	17

Appendix 5-8. Distribution of Institutional Administrators' Responses to Question, "Has the Presence of SSDS Project Increased or Decreased Administrative Problems?"

Change in Administrative Problems	N	Percent
Decreased	80	24
No change	167	50
Increased	86	26

Appendix 5-9. Percentages of Institutional Administrators Indicating That the SSDS Projects Had Beneficial Impacts on the Participating Students at Their Institutions

Type of Project Benefit	Percent Yes
Improved Academic Skills	97
Improved Social/Personal Skills	94
Improved Adjustment to Campus	99

Appendix 5-10. Percentages of Institutional Administrators Indicating SSDS Project Had Impact on Institution by Amount of Influence Project Director Believes He Had

Amount of Project Director Influence	Percentage of Administrators Indicating Project Impact
Little	74
Considerable	77
Extensive	88

Appendix 5-11. Percentages of Institutional Administrators Indicating SSDS Project Had Impact on Institution by Title of SSDS Project Director With Institution

Rank of Project Director	Percent of Administrators Indicating Project Impact
Director	90
Professor	61
Dean	100
Other	48

Appendix 7-1. Crosstabulation of Students' Self-Ratings of Their Academic Skills (Spring) With the Hours of Academic Counseling They Received

Self-Rating of
Academic Skills

FREQUENCY PERCENT ROW PCT COL PCT	HOURS				
	0	1-2	3-4	5 +	TOTAL
	972 . . .	477 . . .	119 . . .	162 . . .	. .
1)POOR	537 12.98 58.05 22.11	247 5.97 26.70 23.15	70 1.69 7.57 23.65	71 1.72 7.68 20.52	925 22.35
2)ADEQUATE	1223 29.56 58.91 50.35	531 12.83 25.58 49.77	140 3.38 6.74 47.30	182 4.40 8.77 52.60	2076 50.17
3)GOOD	669 16.17 58.84 27.54	289 6.98 25.42 27.09	86 2.08 7.56 29.05	93 2.25 8.18 26.88	1137 27.48
TOTAL	2429 58.70	1067 25.79	296 7.15	346 8.36	4138 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE 2.431 DF= 6 PROB=0.8761

Appendix 7-2. Crosstabulation of Students' Reports of Academic Problems (Spring) With the Hours of Personal Counseling They Received

Extent of
Academic
Problems

FREQUENCY PERCENT ROW PCT COL PCT	HOURS				
	0	1	2-4	5 +	TOTAL
	1307 . . .	207 . . .	122 . . .	79 . . .	. .
1)NOT A PROB.	1643 39.56 81.34 49.29	196 4.72 9.70 50.13	105 2.53 5.20 42.51	76 1.83 3.76 41.76	2020 48.64
2)SMALL PROB.	1268 30.53 79.95 38.04	144 3.47 9.08 36.83	100 2.41 6.31 40.49	74 1.78 4.67 40.66	1586 38.19
3)MEDIUM PROB.	422 10.16 77.15 12.66	51 1.23 9.32 13.04	42 1.01 7.68 17.00	32 0.77 5.85 17.58	547 13.17
TOTAL	3333 80.26	391 9.41	247 5.95	182 4.38	4153 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE 11.099 DF= 6 PROB=0.0854

Appendix 7-3. Crosstabulation of Students' Reports of Campus Problems (Spring) With the Hours of Personal Counseling They Received

Extent of
Campus
Problems

FREQUENCY PERCENT ROW PCT COL PCT	HOURS				
	0	1	2-4	5 +	TOTAL
	1317 . . .	207 . . .	123 . . .	80 . . .	. .
1)NOT A PROB.	2446 59.07 80.83 73.61	280 6.76 9.25 71.61	176 4.25 5.82 71.54	124 2.99 4.10 68.51	3026 73.07
2)SMALL PROB.	706 17.05 78.97 21.25	87 2.10 9.73 22.25	50 1.21 5.59 20.33	51 1.23 5.70 28.18	894 21.59
3)MEDIUM PROB.	171 4.13 77.38 5.15	24 0.58 10.86 6.14	20 0.48 9.05 8.13	6 0.14 2.71 3.31	221 5.34
TOTAL	3323 80.25	391 9.44	246 5.94	181 4.37	4141 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE 10.600 DF= 6 PROB=0.1015

Appendix 7-4. Crosstabulation of Students' Reports of Personal Problems (Spring) With the Hours of Personal Counseling They Received

Extent of
Personal
Problems

FREQUENCY PERCENT ROW PCT COL PCT	HOURS				
	0	1	2-4	5 +	TOTAL
	1307	207	123	80	.
	.	.	.	.	.
	.	.	.	.	
	.	.	.	.	
1)NOT A PROB.	2032	236	133	109	2510
	48.95	5.69	3.20	2.63	60.47
	80.96	9.40	5.30	4.34	
	60.97	60.36	54.07	60.22	
2)SMALL PROB.	1079	121	94	56	1350
	25.99	2.91	2.26	1.35	32.52
	79.93	8.96	6.96	4.15	
	32.37	30.95	38.21	30.94	
3)MEDIUM PROB.	222	34	19	16	291
	5.35	0.82	0.46	0.39	7.01
	76.29	11.68	6.53	5.50	
	6.66	8.70	7.72	8.84	
TOTAL	3333	391	246	181	4151
	80.29	9.42	5.93	4.36	100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE 7.924 DF= 6 PROB=0.2437

Appendix 7-5. Percentages of Students in Different Participation Profiles By Sex of Students

Sex of Student	Participation Profile										
	0	1	2	3	4	5	6	7	8	9	10
Male	33	42	35	41	30	41	38	37	38	37	41
Female	67	58	65	59	70	59	62	63	62	63	59

Appendix 7-6. Percentages of Students in Different Participation Profiles Desiring Different Levels of Educational Attainment

Educational Level Desired	Participation Profile										
	0	1	2	3	4	5	6	7	8	9	10
Some College	2	3	1	2	1	1	1	2	3	2	3
2-Year Degree	7	3	8	5	4	6	4	2	8	3	4
4 or 5-Year Degree	20	21	15	15	15	23	14	10	17	13	14
Masters Degree	22	18	25	18	15	26	14	20	20	18	17
Doctorate	11	14	13	15	16	17	21	13	13	13	11
Professional Degree	31	37	33	41	45	23	45	46	33	43	42
Undecided	7	4	5	4	4	4	1	7	6	8	9

Appendix 7-7. Percentages of Students in Different Participation Profiles Expecting Different Levels of Educational Attainment

Educational Level Expected	Participation Profile										
	0	1	2	3	4	5	6	7	8	9	10
Some College	10	3	5	6	5	10	3	3	5	5	6
2-Year Degree	22	24	22	17	20	14	10	17	26	19	18
4 or 5-Year Degree	37	41	38	30	32	44	39	30	33	34	34
Masters Degree	13	14	20	21	18	14	13	22	17	21	17
Doctorate	3	4	4	7	7	2	13	11	5	7	3
Professional Degree	11	10	8	16	15	11	17	14	8	11	15
Undecided	4	4	3	3	3	5	5	3	6	3	7

Appendix 7-8. Percentages of Students in Different Participation Profiles Planning Different Types of Occupations

Occupational Area	Participation Profile										
	0	1	2	3	4	5	6	7	8	9	10
Office Worker	9	3	7	7	7	4	3	4	7	8	7
Homemaker	1	0	2	1	0	0	1	1	1	1	0
Manager/Administrator	10	13	9	14	12	14	11	19	14	15	17
Professional	36	38	34	40	40	45	35	40	30	36	37
Protective Services	2	1	2	2	2	4	2	2	3	3	2
Sales	2	2	2	3	2	1	1	1	1	1	2
Teacher	10	9	11	11	12	8	21	9	12	10	10
Technical/Skilled Crafts	12	16	12	10	11	8	12	8	11	13	12
Undecided	8	6	6	6	6	4	7	5	9	5	6
Other	10	11	15	7	7	14	7	12	13	7	7

Appendix 8-1. Details on Logistic Multiple Regression Model

This appendix is a supplement to the analysis of the persistence outcome discussed in the body of the report, Chapter 8. The statistical model used is briefly described, and some details and examples of the interpretations of the results are given.

The logistic multiple regression model used for the analysis of the persistence is designed to predict the probability of each response category of categorical dependent variable from the linear combination of a set of continuous predictor variables. The usual regression procedures are inefficient in this application because of the categorical nature of dependent variable. The contingency table models are practical only with a small set of categorical predictors.

In the analyses used in this study the outcome variable persistence was coded as "1" if the student remained enrolled in college through the study, otherwise it was coded as "0". Of the four independent variables used in the final analysis of the impact of persistence three of them are categorical, institutional type, profile, and dependency status. These variables were coded as dummy variables with 3, 10, and 2 dummy indices, respectively. With the continuous independent variable student incentives, there were 16 independent measures. If the independent variables are called "X" and the dependent variable "Y", then the procedure determines a set of coefficient β's,

$$X_i\beta = X_{c1}\beta_1 + X_{i2}\beta_2 + \ldots + X_{i17}\beta_{17}$$

where $i = 1$ to η observations

$X_{i1} = 1$ hence $_1$, is the intercept

$\beta_2 - \beta_{17}$ are the coefficients of the 16 independent variables.

The assumption of the model is that

$$\text{Prob}(Y = 1) = \frac{\exp(X_i\beta)}{1 + \exp(X_i\beta)} \qquad (2)$$

From the above it can be seen that $\exp(X_i\beta)$ are the odds that the $_i$th individual will persist. Further since

$$\exp(X_i\beta) = \pi \exp(X_{ji}\beta_i) \qquad (3)$$

the individual coefficients β_i when exponentiated yield multiplicative coefficients determining an individual's odds.

Table A8-1 shows the log odd coefficients and the odds values for the persistence analysis reported in less detail in Chapter 8. The coefficients for the intercept reflect the combination of the omitted categories of the three categorical variables and the mean for the continuous variables. Thus the intercept represents a student in a public four-year college, who has received no SSDS-like services, who is from a higher than average income family and is living at home or in college housing, and is receiving $520.34 per year in grants or fee waivers. The odds for this "average" student of 6.632 to 1 indicate a probability of 0.869 of the student completing the academic year.

To obtain the odds for other students the product of the intercept odds coefficient and the odds coefficients for the categories defining the student are used. The odds for the student who is average in all things but services received and who got the full range of SSDS services, Profile 10, would be 15.008, (6.632 X 2.263). If the student is in a private four-year institution and is receiving all types of SSDS service then the odds of remaining enrolled are 34.8791 to 1, (6.632 X 2.324 X 2.263). To obtain the odds for a student who has other than the average amount of Monetary Incentive the multiplier used is odds coefficient given in the table raised to the power of the incentive increment (in $100 units). For the student who received $500 more in grants and waiver than the average student the multiplier used would be 1.013 raised to the fifth power or 1.067.

Table A8-1. Logistic Multiple Regression Predicting Student Persistence

Predictor	Log Odds β	Odds β
*Intercept	1.892	6.632
Institutional Type		
Private two-year	-**	-
Public two-year	-	-
Private four-year	0.843	2.324
Participation Profile		
Profile 1	-	-
Profile 2	-	-
Profile 3	0.334	1.396
Profile 4	0.625	1.869
Profile 5	-	-
Profile 6	0.727	2.068
Profile 7	-	-
Profile 8	-	-
Profile 9	0.715	2.044
Profile 10	0.817	2.263
Dependency Status		
Independent	-0.518	0.596
Dependent/Low Income	-	-
Monetary Incentives ($100's)	0.013	1.013

***D = 0.03

*Value at intercept represents a student in a Public four-year institution, who received no SSDS type services, and is living at home or in a dorm and from a family with a higher than average income.

**The "-" indicates coefficient is not significant at 0.05 level.

***The D statistic is comparable to R^2 of the normal multiple regression.